

Curriculum Vitae for Stephan Heunis

Name: Stephan Heunis
Position: Research Data and Software Engineer, Postdoctoral Researcher
Research field: Neuroinformatics, reproducibility, data quality, data management
Affiliations:

- Institute of Neuroscience and Medicine, Brain & Behaviour (INM-7), Research Center Jülich, Germany.
- Department of Psychology, Education and Child Studies (DPECS), Erasmus School of Social and Behavioral Sciences (ESSB), Erasmus University Rotterdam (EUR), The Netherlands.
- Leiden Consortium Individual Development (L-CID), Faculty of Social and Behavioral Sciences (FSW), Leiden University, The Netherlands.

Contact: jsheunis@gmail.com
Links: [Website](#), [Twitter](#), [Mastodon](#), [Github](#), [Google scholar](#)

Tertiary Qualifications

PhD (Real-time neuroimage processing), Department of Electrical Engineering, Eindhoven University of Technology, The Netherlands (2017 to 2021)

Master of Science (Biomedical Engineering), Department of Mechanical and Mechatronic Engineering, Stellenbosch University, South Africa (2011 to 2012)

Bachelor of Engineering (Mechatronic), Department of Mechanical and Mechatronic Engineering, Stellenbosch University, South Africa (2007 to 2010)

Publications

Peer-reviewed journal articles:

Heunis, S., Breeuwer, M., Caballero-Gaudes, C., Hellrung, L., Huijbers, W., Jansen, J.F., Lamerichs, R., Zinger, S., and Aldenkamp, A.P. 2021. [The effects of multi-echo fMRI combination and rapid T2*-mapping on offline and real-time BOLD sensitivity](#). NeuroImage, 238, <https://doi.org/10.1016/j.neuroimage.2021.118244>

Heunis, S., Breeuwer, M., Caballero-Gaudes, C., Hellrung, L., Huijbers, W., Jansen, J.F., Lamerichs, R., Zinger, S., and Aldenkamp, A.P. 2021. [rt-me-fMRI: A task and resting state dataset for real-time, multi-echo fMRI methods development and validation](https://doi.org/10.12688/f1000research.29988.1). F1000Research, 10:70. <https://doi.org/10.12688/f1000research.29988.1>

Elizabeth DuPre, Taylor Salo, Zaki Ahmed, Peter A. Bandettini, Katherine L. Bottenhorn, César Caballero-Gaudes, Logan T. Dowdle, Javier Gonzalez-Castillo, **Stephan Heunis**, Prantik Kundu, Angela R. Laird, Ross Markello, Christopher J. Markiewicz, Stefano Moia, Isla Staden, Joshua B. Teves, Eneko Uruñuela, Maryam Vaziri-Pashkam, Kirstie Whitaker, and Daniel A. Handwerker. 2021. [TE-dependent analysis of multi-echo fMRI with tedana](https://doi.org/10.21105/joss.03669). Journal of Open Source Software, 6(66), 3669, <https://doi.org/10.21105/joss.03669>

Kristijan Armeni, Loek Brinkman, Rickard Carlsson, Anita Eerland, Rianne Fijten, Robin Fondberg, Vera E Heininga, **Stephan Heunis**, Wei Qi Koh, Maurits Masselink, Niall Moran, Andrew Ó Baoill, Alexandra Sarafoglou, Antonio Schettino, Hardy Schwamm, Zsuzsika Sjoerds, Marta Teperek, Olmo R van den Akker, Anna van't Veer, Raul Zurita-Milla. 2021. [Towards wide-scale adoption of open science practices: The role of open science communities](https://doi.org/10.1093/scipol/scab039), Science and Public Policy, Volume 48, Issue 5: 605–611. <https://doi.org/10.1093/scipol/scab039>

Elizabeth Levitis, Cassandra D Gould van Praag, Rémi Gau, **Stephan Heunis**, Elizabeth DuPre, Gregory Kiar, Katherine L Bottenhorn, Tristan Glatard, Aki Nikolaidis, Kirstie Jane Whitaker, Matteo Mancini, Guiomar Niso, Soroosh Afyouni, Eva Alonso-Ortiz, Stefan Appelhoff, Aurina Arnatkeviciute, Selim Melvin Atay, Tibor Auer, Giulia Baracchini, Johanna M M Bayer, Michael J S Beauvais, Janine D Bijsterbosch, Isil P Bilgin, Saskia Bollmann, Steffen Bollmann, Rotem Botvinik-Nezer, Molly G Bright, Vince D Calhoun, Xiao Chen, Sidhant Chopra, Hu Chuan-Peng, Thomas G Close, Savannah L Cookson, R Cameron Craddock, Alejandro De La Vega, Benjamin De Leener, Damion V Demeter, Paola Di Maio, Erin W Dickie, Simon B Eickhoff, Oscar Esteban, Karolina Finc, Matteo Frigo, Saampras Ganesan, Melanie Ganz, Kelly G Garner, Eduardo A Garza-Villarreal, Gabriel Gonzalez-Escamilla, Rohit Goswami, John D Griffiths, Tijn Grootswagers, Samuel Guay, Olivia Guest, Daniel A Handwerker, Peer Herholz, Katja Heuer, Dorien C Huijser, Vittorio Iacovella, Michael J E Joseph, Agah Karakuzu, David B Keator, Xenia Kobeleva, Manoj Kumar, Angela R Laird, Linda J Larson-Prior, Alexandra Lautarescu, Alberto Lazari, Jon Haitz Legarreta, Xue-Ying Li, Jinglei Lv, Sina Mansour L., David Meunier, Dustin Moraczewski, Tulika Nandi, Samuel A Nastase, Matthias Nau, Stephanie Noble, Martin Norgaard, Johnes Obungoloch, Robert Oostenveld, Edwina R Orchard, Ana Luísa Pinho, Russell A Poldrack, Anqi Qiu, Pradeep Reddy Raamana, Ariel Rokem, Saige Rutherford, Malvika Sharan, Thomas B Shaw, Warda T Syeda, Meghan M Testerman, Roberto Toro, Sofie L Valk, Sofie Van Den Bossche, Gaël Varoquaux, František Váša, Michele Veldsman, Jakub Vohryzek, Adina S Wagner, Reubs J Walsh, Tonya White, Fu-Te Wong, Xihe Xie, Chao-Gan Yan, Yu-Fang Yang, Yohan Yee, Gaston E Zanitti, Ana E Van Gulick, Eugene Duff, and Camille Maumet. 2021. [Centering](https://doi.org/10.1093/scipol/scab039)

[inclusivity in the design of online conferences—An OHBM–Open Science perspective.](#)
GigaScience, Vo 10:8. <https://doi.org/10.1093/gigascience/giab051>

Elise Bannier, Gareth Barker, Valentina Borghesani, Nils Broeckx, Patricia Clement, Kyrre E. Emblem, Satrajit Ghosh, Enrico Glerean, Krzysztof J. Gorgolewski, Marko Havu, Yaroslav O. Halchenko, Peer Herholz, Anne Hespel, **Stephan Heunis**, Yue Hu, Chuan-Peng Hu, Dorien Huijser, María de la Iglesia Vayá, Radim Jancalek, Vasileios K. Katsaros, Marie-Luise Kieseler, Camille Maumet, Clara A. Moreau, Henk-Jan Mutsaerts, Robert Oostenveld, Esin Ozturk-Isik, Nicolas Pascual Leone Espinosa, John Pellman, Cyril R Pernet, Francesca Benedetta Pizzini, Amira Šerifović Trbalić, Paule-Joanne Toussaint, Matteo Visconti di Oleggio Castello, Fengjuan Wang, Cheng Wang, Hua Zhu. [The Open Brain Consent: Informing Research Participants and Obtaining Consent to Share Brain Imaging Data.](#) Human Brain Mapping 2021; 42: 1945-1951. <https://doi.org/10.1002/hbm.25351>

Heunis, S., Lamerichs, R., Zinger, S., Aldenkamp, B., Breeuwer, M., 2018. [Quality and denoising in real-time fMRI neurofeedback: a methods review.](#) Human Brain Mapping. 2020; 41: 3439-3467. <https://doi.org/10.1002/hbm.25010>.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C.F., Dreber, A., Huber, J., Johannesson, M., Kirchler, M., Iwanir, R., Mumford, J.A., Adcock, A., Avesani, P., Baczkowski, B., Bajracharya, A., Bakst, L., Ball, S., Barilari, M., Bault, N., Beaton, D., Beitner, J., Benoit, R., Berkers, R., Bhanji, J., Biswal, B., Bobadilla-Suarez, S., Bortolini, T., Bottenhorn, K., Bowring, A., Braem, S., Brooks, H., Brudner, E., Calderon, C., Camilleri, J., Castellon, J., Cecchetti, L., Cieslik, E., Cole, Z., Collignon, O., Cox, R., Cunningham, W., Czoschke, S., Dadi, K., Davis, C., Luca, A.D., Delgado, M., Demetriou, L., Dennison, J., Di, X., Dickie, E., Dobryakova, E., Donnat, C., Dukart, J., Duncan, N.W., Durnez, J., Eed, A., Eickhoff, S., Erhart, A., Fontanesi, L., Fricke, G.M., Galvan, A., Gau, R., Genon, S., Glatard, T., Glerean, E., Goeman, J., Golowin, S., González-García, C., Gorgolewski, K., Grady, C., Green, M., Moreira, J.G., Guest, O., Hakimi, S., Hamilton, J.P., Hancock, R., Handjaras, G., Harry, B., Hawco, C., Herholz, P., Herman, G., **Heunis, S.**, Hoffstaedter, F., Hogeveen, J., Holmes, S., Hu, C.-P., Huettel, S., Hughes, M., Iacovella, V., Jordan, A., Isager, P., Isik, A.I., Jahn, A., Johnson, M., Johnstone, T., Joseph, M., Juliano, A., Kable, J., Kassinopoulos, M., Koba, C., Kong, X.-Z., Kosciak, T., Kucukboyaci, N.E., Kuhl, B., Kupek, S., Laird, A., Lamm, C., Langner, R., Lauharatanahirun, N., Lee, H., Lee, S., Leemans, A., Leo, A., Lesage, E., Li, F., Li, M., Lim, P.C., Lintz, E., Liphardt, S., Vermeer, A.L., Love, B., Mack, M., Malpica, N., Marins, T., Maumet, C., McDonald, K., McGuire, J., Melero, H., Leal, A.M., Meyer, B., Meyer, K., Mihai, P., Mitsis, G., Moll, J., Nielson, D., Nilsson, G., Notter, M., Olivetti, E., Onicas, A., Papale, P., Patil, K., Peelle, J.E., Pérez, A., Pischedda, D., Poline, J.-B., Prystauka, Y., Ray, S., Reuter-Lorenz, P., Reynolds, R., Ricciardi, E., Rieck, J., Rodriguez-Thompson, A., Romyn, A., Salo, T., Samanez-Larkin, G., Sanz-Morales, E., Schlichting, M., Schultz, D., Shen, Q., Sheridan, M., Shiguang, F., Silvers, J., Skagerlund, K., Smith, A., Smith, D., Sokol-Hessner, P., Steinkamp, S., Tashjian, S., Thirion, B., Thorp, J., Tinghög, G., Tisdall, L., Tompson, S., Toro-Serey, C., Torre, J., Tozzi, L., Truong, V., Turella, L., Veer, A.E. van't, Verguts, T., Vettel, J., Vijayarajah, S., Vo, K., Wall, M., Weeda, W.D., Weis, S., White, D., Wisniewski, D., Xifra-Porxas,

A., Yearling, E., Yoon, S., Yuan, R., Yuen, K., Zhang, L., Zhang, X., Zosky, J., Nichols, T.E., Poldrack, R.A., Schonberg, T., 2020. [Variability in the analysis of a single neuroimaging dataset by many teams](https://doi.org/10.1038/s41586-020-2314-9). Nature 582, 84–88. <https://doi.org/10.1038/s41586-020-2314-9>

Tomas Ros, Stefanie Enriquez-Geppert*, Vadim Zotev, Kymberly Young, Guilherme Wood, Susan Whitfield-Gabrieli, Patrik Vuilleumier, Feng Wan, François Vialatte, Dimitri Van De Ville, Doron Todder, Tanju Surmeli, James Sulzer, Ute Strehl, Barry Sterman, Naomi Steiner, Bettina Sorger, Surjo Soekadar, Ranganatha Sitaram, Leslie Sherlin, Michael Schönenberg, Frank Scharnowski, Manuel Schabus, Katya Rubia, Agostinho Rosa, Miriam Reiners, Jaime Pineda, Christian Paret, Alexei Ossadtchi, Andrew Nicholson, Wenya Nan, Javier Minguez, Jean-Arthur Micoulaud-Franchi, David M. A. Mehler, Michael Lührs, Joel Lubar, Fabien Lotte, David E. J. Linden, Jarrod Lewis-Peacock, Mikhail Lebedev, Ruth Lanius, Andrea Kübler, Cornelia Kranczioch, Yury Koush, Lilian Konicar, Simon H. Kohl, Silvia E. Kober, Manousos Klados, Camille Jeunet, Tieme Janssen, Rene J. Huster, Kerstin Hoedlmoser, Laurence Hirshberg, **Stephan Heunis**, Talma Hendler, Michelle Hampson, Adrian Guggisberg, John Gruzelier, Rainer Göbel, Nicolas Gninenko, Alireza Gharabaghi, Paul Frewen, Thomas Fovet, Thalia Fernandez, Carlos Escolano, Ann-Christine Ehlis, Renate Drechsler, R Christopher deCharms, Stefan Debener, Dirk De Ridder, Eddy Davelaar, Marco Congedo, Marc Cavazza, Rien M. H. M. Breteler, Daniel Brandeis, Jerzy Bodurka, Niels Birbaumer, Olga Bazanova, Robert Bauer, Beatrix Barth, Panagiotis Bamidis, Tibor Auer, Martijn Arns, Robert T. Thibault. 2020. [Consensus on the reporting and experimental design of clinical and cognitive-behavioural neurofeedback studies \(CRED-nf checklist\)](https://doi.org/10.1093/brain/awaa009). Brain 143, 1674–1685. <https://doi.org/10.1093/brain/awaa009>

Heunis, S., Besseling, R., Lamerichs, R., de Louw, A., Breeuwer, M., Aldenkamp, B., Bergmans, J., 2018. [Neu3CA-RT: A framework for real-time fMRI analysis](https://doi.org/10.1016/j.psychresns.2018.09.008). Psychiatry Research: Neuroimaging 282, 90–102. <https://doi.org/10.1016/j.psychresns.2018.09.008>

Besseling, R., Lamerichs, R., Michels, B., **Heunis, S.**, de Louw, A., Tijhuis, A., Bergmans, J., Aldenkamp, B., 2018. [Functional network abnormalities consistent with behavioral profile in Autism Spectrum Disorder](https://doi.org/10.1016/j.psychresns.2018.02.006). Psychiatry Research: Neuroimaging 275, 43–48. <https://doi.org/10.1016/j.psychresns.2018.02.006>

Heunis, J.S., Scheffer, C. and Schreve, K., 2013, [A User Interface for a Seven Degree of Freedom Surgical Robot](#). R&D Journal of SAIMEchE, Vol. 29, pp. 44-54, ISSN 0257- 9669.

Preregistrations, preprints, in prep:

Aref Kalantari¹, Michał Szczepanik, **Stephan Heunis**, Christian Mönch, Michael Hanke, Thomas Wachtler, Markus Aswendt. 2022. How to establish and maintain a multimodal animal data repository using DataLad.

Van der Meulen, M., Dobbelaar, S., Van Drunen, L., **Heunis, S.**, Blankenstein, N.E., & Crone, E. A. 2022. Transitioning from childhood into adolescence: A comprehensive longitudinal behavioral and neuroimaging study on prosocial behavior and social inclusion.

Achterberg, M., Mulder, J., Dobbelaar, S., **Heunis, S.**, & Crone, E. (2022, June 21). [Individual differences in developmental trajectories of social emotion regulation from childhood to emerging adolescence](https://doi.org/10.17605/OSF.IO/BYN7R). <https://doi.org/10.17605/OSF.IO/BYN7R>

Peer-reviewed conference articles:

Dellimore, K., **Heunis, S.**, Gohier, F., Archer, E., Villiers, A. de, Smith, J., Scheffer, C., 2013. [Development of a diagnostic glove for unobtrusive measurement of chest compression force and depth during neonatal CPR](https://doi.org/10.1109/EMBC.2013.6609509), in: 2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC). pp. 350–353. <https://doi.org/10.1109/EMBC.2013.6609509>

Heunis, J.S., Scheffer, C., Schreve, K., 2012. [A user interface for a seven degree of freedom surgical robot](https://doi.org/10.1109/ROBOMECH.2012.6558467), in: 2012 5th Robotics and Mechatronics Conference of South Africa, pp. 1–6. <https://doi.org/10.1109/ROBOMECH.2012.6558467>

Conference abstracts/posters/demonstrations

Stephan Heunis, Christian Mönch, Benjamin Poldraxk, and Michael Hanke. 2022. [DataCat: generate a user-friendly data browser from structured metadata](#). Poster and software demonstration at the 2022 annual meeting of the Organization of Human Brain Mapping. Glasgow, Scotland.

Heunis, S., Hellrung, L., Meer, V.D., Bergert, S., Sladky, R., Pamplona, G.S.P., Scharnowski, F., Koush, Y., Mehler, D., Falcon, C., Gispert, J.D., Molinuevo, J.L., Skouras, S., 2019. [rtQC: an open-source toolbox for real-time fMRI quality control](#). Poster and software demonstration at the 2019 annual meeting of the Organization of Human Brain Mapping. Rome, Italy.

Heunis, J.S., Lamerichs, R., Song, G., Zinger, S., Aldenkamp, B., 2019. [Improving BOLD sensitivity with real-time multi-echo echo-planar imaging - Towards a cleaner neurofeedback signal](#). Poster at the 11th annual meeting of the Benelux Chapter of the International Society for Magnetic Resonance in Medicine. Leiden, The Netherlands.

Heunis, J.S., Besseling, R., Lamerichs, R., De Louw, A., Aldenkamp, B., Bergmans, J., 2018. [Dynamic T2* and So mapping towards real-time multi-echo fMRI denoising](#). Poster at the

10th annual meeting of the Benelux Chapter of the International Society for Magnetic Resonance in Medicine. Antwerpen, Belgium.

Invited presentations, workshops, talks

Heunis, Stephan, 2022. [Reproducible Data Management with DataLad](#). Invited workshop at the [Brainhack Nordic 2022](#) event.. Copenhagen, Denmark.

Heunis, Stephan, 2022. [Tools for reproducible workflows](#). Invited keynote talk at the [Brainhack Krakow 2022](#) event. Krakow, Poland.

Heunis, Stephan, 2021. [Balancing open data with personal data privacy: a future outlook on MRI data sharing](#). Invited talk at the [MRI Together Workshop](#). Virtual online.

Heunis, Stephan, 2021. [Tools for reproducible workflows](#). Invited talk at the [Chinese Open Science Network](#). Virtual online.

Heunis, S. and Bayrak, Ş., 2021. ["I'd like to reproduce your results..." and other tales in Reproducible Workflows](#). Workshop at the [OHBM Hackathon 2021](#) TrainTrack Session event. Virtual online.

Heunis, J.S. 2021. [Interactive data visualization with Python, Plotly and Dash](#). Software talk and demonstration at the [OpenMR Virtual 2021 event](#). Virtual online.

Heunis, J.S. et al. 2020. Open neuroimaging data and personal data privacy: anonymization. Panel discussion at the OHBM Open Science Room 2020. Virtual online. Links:

Stephan Heunis, Emma Bluemke, Andrew Task, Jonathan Passerat-Palmbach, PJ Toussaint, Adam Thomas, Tonya White, Michael Beauvais, Gustav Nilsson, Lyuba Zehl, Reubs J Walsh. 2020. [Open neuroimaging data and personal data privacy: convergence or divergence?](#) Panel discussion at the [OHBM Open Science Room 2020](#). Virtual online.

Heunis, J.S. 2020. [Hands-on fMRI code and data sharing](#). Invited workshop at the Food for Psychologists. The Hague, The Netherlands (online).

Heunis, J.S. 2020. [Brain research data and personal data privacy: practical tips to share and protect](#). Invited talk at the Think Open Rovereto Workshop 2020. Trento, Italy (online).

Heunis, J.S. 2019. [Real-time \(fMRI\) quality control](#). Invited lecture at the 2019 international real-time functional imaging and neurofeedback conference: [rtFIN2019](#). Aachen, Germany.

Heunis, J.S. 2019. [Building Open Science Communities](#). Invited talk at the 2019 [Eurotech Summer School: Open Science in Practice](#). EPFL, Lausanne, Switzerland.

Heunis, J.S. 2019. [Open Brain Consent - GDPR edition](#). Lightning talk at the 2019 meeting of the [Society for the Improvement of Psychological Science](#). Rotterdam, The Netherlands.

Heunis, J.S. 2019. [Real-time fMRI neurofeedback methodology: current challenges, possible solutions and future perspectives](#). Speaker during the session "Neurofeedback in psychiatry" at the 2019 annual [Dutch Neuroscience Meeting](#). Lunteren, The Netherlands.

Heunis, J.S. 2019. [Introduction to open science and OpenMR Benelux](#). Speaker and event host at the 1st annual meeting of the [OpenMR Benelux](#) community. Leiden, The Netherlands. ([video link](#))

Heunis, J.S. 2018. [Real-time fMRI neurofeedback - from technology to applications](#). Speaker and session moderator at the 11th annual [Donders Discussions](#) conference. The Donders Institute. Nijmegen, The Netherlands.

Heunis, J.S., Besseling, R., Lamerichs, R., De Louw, A., Aldenkamp, B., Bergmans, J., 2018. [Dynamic T2* and So mapping towards real-time multi-echo fMRI denoising](#). Oral presentation at the 10th annual meeting of the [Benelux Chapter of the International Society for Magnetic Resonance in Medicine](#). Antwerpen, Belgium.

Community building and leadership

Member of the [OHBM Open Science Special Interest Group](#) and [Open Science Room](#) **co-chair** for the 2020 annual conference of the Organization for Human Brain Mapping. Montréal, Canada.

Founder of [OpenMR Benelux](#), a community promoting an open and inclusive research culture and transparent practices in the field of Magnetic Resonance Imaging in Medicine, through annual events with talks, workshops and collaboration. Main organiser of the first [OpenMR Benelux event \(2019\)](#) and main advisor to the organising committee of the 2020 event (Nijmegen, The Netherlands) and planned 2021 event (virtual).

Organizing committee member (and representative of the Eindhoven University of Technology) for the [EuroTech Summer school: Open Science in Practice 2019](#). Lausanne, Switzerland.

Founder of the [Open Science Community Eindhoven](#) (OSC/e), a community of researchers and faculty at TU/e (representing multiple departments) working together to improve the adoption of transparent and reproducible practices across the research lifecycle.

Treasurer of the organizing committee for the 11th annual meeting of the [ISMRM Benelux chapter](#). Leiden, The Netherlands.

Director on the board of [Stichting Solaris Onderzoek en Ontwikkeling](#), a non-profit organization dedicated to supporting early career researchers.

Funding and awards

[Annual IBI-INM Retreat](#), Jülich, Germany, 2022.

Best Poster Award for *DataCat: generate a user-friendly data browser from structured metadata*.

[Open Initiatives Trophy, runner up](#).

At the Netherlands National Open Science Festival, 2021.

[Mozilla Open Science Mini-Grant](#) - USD10,000.

For organising the [Avengers for Better Science workshop](#) to help future research leaders learn to conduct research in an open and inclusive community. Shared grant.

[Organization for Human Brain Mapping \(OHBM\)](#) - USD500.

Travel grant for attending the 2019 annual OHBM hackathon and conference in Rome, Italy.

[International Brain Research Organisation \(IBRO\)](#) - EUR1000.

For organising the [OpenMR Benelux \(2019\)](#) event.

[IEEE EMBS Benelux chapter](#) - USD1000.

For organising the [OpenMR Benelux \(2019\)](#) event.

Work experience

Research Software Engineer.

- [Psychoinformatics Lab](#), Institute of Neuroscience and Medicine, Brain & Behaviour (INM-7), Research Centre Jülich, Jülich, Germany.
- Developing software and implementing solutions for reproducible research data management and metadata handling as part of the [DataLad ecosystem](#).

Postdoctoral researcher, (2021-current).

- Department of Psychology, Education and Child Studies (DPECS), Erasmus School of Social and Behavioral Sciences (ESSB), Erasmus University Rotterdam (EUR) and Leiden Consortium Individual Development (L-CID), Faculty of Social and Behavioral Sciences (FSW), Leiden University.
- Developmental Neuroscience research; developing reproducible analysis pipelines for MRI data; data management of the [LCID dataset](#).

Software programmer, [Eindhoven University of Technology](#) (2019-2020)

Translation of biomedical image processing course material from Matlab to Python.

Researcher and PhD candidate, [Eindhoven University of Technology](#) (2017-2020/2021)

Researching signal processing and data quality control methods in the field of real-time functional MRI, towards the investigation of neurofeedback treatment in clinical practice.

Head of Solution Delivery, [JourneyApps Inc.](#) South Africa (2015-2016)

Leading a team of 9 software engineers in the process of delivering "Software as a Service" enterprise mobile applications to customers worldwide.

Solution Delivery Engineer, [JourneyApps Inc.](#) South Africa (2014-2015)

Designing and building enterprise mobility software applications for customers across multiple industries worldwide, using the JourneyApps development platform.

Commercial Engineer, [Rockwell Automation.](#) South Africa (2013-2014)

Pre-sales technical support of the EMEA (Europe, Middle East, Africa) sales team selling hardware and software control systems products to large companies in the food and beverage industry.

Research Engineer, Stellenbosch University. South Africa (2012-2013)

Technical design, literature research, laboratory testing, and academic writing.

Software programmer, Stellenbosch University. South Africa (2008)

Translating FORTRAN programs to Matlab.

Skills

Programming/scripting experience:

- Python (4 years)
- Javascript (4 years)
- HTML+CSS (2years)
- Plotly Dash (2 years)

- Shell scripting (4 years)
- Arduino/C (6 years)
- Matlab (13 years)

Computing / continuous integration:

- Binder for cloud computing
- HPC for scientific data analysis (SLURM, HTCondor)
- JupyterHub deployment on S3
- Appveyor
- Github Actions

Transparent research tools and practices:

- Software version control with git and GitHub
- Reproducible data management with DataLad
- Jupyter Notebooks, Lab, Books
- Python package development
- Sphinx documentation
- Neuroimage data curation with the BIDS standard
- Neuroimage data sharing

Project/team management:

- Agile software development processes (2 years)
- Working in a team of software engineers (4 years)
- Team leader experience (1 year)
- General engineering project management (4 years)
- International networking and community development (6 years)

Spoken languages:

- English (Professional proficiency)
- Afrikaans (Professional proficiency, 1st language)
- Dutch (Conversational and reading proficiency)
- German (Basic conversational and reading proficiency)