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Tomas Fiers

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[GitHub](#) | [Twitter](#)

Profile & values: Curiosity-driven | Not satisfied with surface-level explanations | Signal-to-noise in communication | Precision & correctness | Good user interfaces. **Motivations:** The pursuit of a proof-of-concept | The *flow* during a deep session of designing, problem-solving, or performance-optimization

CURRENT POSITION

PhD student in computational neuroscience

Feb 2020 – Dec 2023
(expected)

University of Nottingham, UK

Topic: Synapse-level network inference from voltage-imaging signals. Supervisors: [Mark Humphries](#), Matias Ison

Skills trained: Modelling & simulation of complex systems | Scientific software design, testing, and performance-optimization (→ Spiking neural net library) | Experimental design | Data analysis | Maintaining a steady stream of scientific deliverables | Process large amounts of new literature | Communicate & summarize complex ideas | Self-direction, proactiveness, and critical self-assessment

Outreach: [Julia for Scientists](#) talk | TA & technical infrastructure for the [2022 Tutorial](#) at COSYNE (major conference for computational & systems neuroscience) & for the [COMOB project](#) (collaborative brain modelling)

WORK EXPERIENCE

DataCamp | Software engineering intern

Jul 2016 – Sep 2016
Leuven, Belgium

(↔ *Data science training platform*)

Developed a complete data processing pipeline from scratch (Postgres, Redis, Node.js, React), that met the requirements for reliability, scalability, and performance, and that, last I heard, was still in use in production

Byteflies | Data science intern

Jul 2017 – Sep 2017
Antwerp, Belgium

(↔ *Medical wearables startup*)

Validate signal quality of motion sensors (accelerometer, gyroscope, magnetometer) against golden standard (motion capture), for use in a medical device (Python data stack)

Fluves | Business analysis intern

Sep 2017 – Dec 2017
Ghent, Belgium

(↔ *Fiber-optic industrial monitoring*)

Preparation of business plan for joint venture with offshore wind company (Excel)

EDUCATION

BSc in engineering sciences | Computer science & electrical engineering

Sep 2012 – Jun 2017
Leuven, Belgium

KU Leuven (THE Ranking 2023: 42nd in World)

Led the teams that won the engineering design challenge for first years (2013, 1st place) and second years (2014, 2nd place; with a project on real-time speech processing)

MSc in biomedical engineering | Signal processing specialization

Sep 2016 – Jan 2019
Belgium

KU Leuven For the professional title of “burgerlijk ingenieur” (highest-level STEM degree in the country)

Some electives: [Nonlinear dynamical systems](#) | Multivariate & robust statistics | Two Bayesian modelling courses | Three machine learning and AI courses | IT security | Computational & Systems neuroscience

Master thesis: Real-time signal detection for closed-loop, in-vivo neuroscience. (Detection of sharp-wave ripples on electrodes implanted in the hippocampus, [Kloosterman Lab](#), at [Neuro-Electronics Research Flanders](#)).
Filter design & analysis | RNN training & evaluation | GUI development for data annotation | [3D brain viewer](#)

LANGUAGES

Productive: OCaml | R | SQL | C | TypeScript | React.js | Kotlin | LaTeX | Command-line tools | French

Expert: Julia | Python