

Résumé - Arash Shahsavari

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Experience

- 2022-** **Senior Data Scientist - Avida Finance**
Stockholm, SE As a technical expert on data-driven models at Avida, my responsibilities include:
- Building machine learning models end to end, from sourcing and wrangling data, to feature and model selection, to implementing and deploying to production systems (both real-time and batch).
 - Developing production systems that Avida's machine learning models live in, and new tools to meet model validation and monitoring needs - rebuilt one of the main ML production systems to be 60x faster with improved control.
 - Integrating with the wider company to create impact by mentoring junior colleagues, building lasting collaborations across teams, driving changes that require multi-department alignment, and presenting change proposals to CEO+CFO+other CXOs for decisioning.
- 2022-2023** **Visiting Researcher - University of Cambridge**
2019-2022 **Bioinformatician - University of Cambridge**
Cambridge, UK
- Machine learning and statistics on terabyte-scale datasets for analysis and modeling, using a broad mix of techniques and tools.
 - Developed [R package ClustAssess](#) from scratch, which I continue to maintain.
 - Involved in entire recruitment pipeline, from designing technical skills test, to selecting candidates for interviews, interviewing and final recruitment decisions.

Education

- 2016 - 2019** **M.S. in Complex Adaptive Systems - Chalmers University of Technology**
Gothenburg, SE Selected Coursework: Neural Networks, Stochastic Optimization, Information Theory, Dynamical Systems.
- Fall 2017** **Exchange Studies - Dongguk University**
Seoul, SK Selected Coursework: Multiple View Geometry, Deep Learning.
- 2013 - 2016** **Electrical Engineering - Lund University**
Lund, SE Selected Coursework: Multivariable Calculus, Control Theory, Mathematical Statistics, Numerical Analysis.

Teaching and Mentorship

Teaching

- Intro to Machine Learning - Lecturing for PhD students and postdocs in Cambridge (2021), and separately for industry professionals (2022).
- Teaching coding to classes of children and developing teaching materials and curriculum at Kodcentrum (2018-2019).

Mentorship

- Guided Junior Data Scientist at Avida Finance to advance to Data Scientist position within one year of employment.
- Coached Computer Science M.Sc. student through 6-month Cambridge internship with weekly 1-on-1s. Advised and assisted the intern to contribute to open-source software and co-author scientific publication (2021). The person went on to join the group as a full-time employee.

Skills and Development

- **Programming Environments:** Python ([Optimization example](#)), R ([Clustering evaluation package](#), [Random Forest feature selection example](#)), Julia ([Outlier detection example](#), [Optimization example](#)), SQL, C++, Bash, MATLAB, \LaTeX , Arduino.
- **Computing Tools:** AWS ML stack, SLURM, Spark, git, Jupyter Notebook ([Example](#)), R Markdown ([Example](#)).
- **Software Packages:** [ClustAssess](#) - developed from scratch, currently package maintainer [Github](#), [Example](#), [Documentation](#).
- **Scientific Publications:** [4 papers on biomedical data science](#).
- **Professional Courses:** [Python for Bioimage Analysis](#) - week-long course by the Royal Microscopical Society.
- **Self-Directed Learning:** [Intermediate Linear Algebra](#), [Computational Linear Algebra](#), [Real Analysis](#), [Combinatorics & Graph Theory](#), [Reinforcement Learning](#).
- **Webpage:** sharash.github.io