

# Résumé - Arash Shahsavari

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## 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.

## Experience

- 2022-**    **Senior Data Scientist - Avida Finance**  
Stockholm, SE    As a technical expert on data-driven models at Avida, my responsibilities include:
- Planning data science tasks in alignment with Avida's goals and executing the tasks.
  - Developing, implementing, deploying, monitoring and documenting Avida's data-driven models, including application scorecards for underwriting and models for credit losses.
  - Building technical tools to meet model validation and monitoring needs.
  - Interpreting regulations for Avida's context and translating them into technical specifications as well as implementing them into systems.
  - Presenting models to non-technical forums including CXOs for executive decisions on deployment.
- 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.

## 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:** SLURM, 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](https://sharash.github.io)