Résumé - Arash Shahsavari

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Education

2016 - 2019 **M.S. in Complex Adaptive Systems - Chalmers University of Technology**
Gothenburg, Sweden
Selected Coursework: Neural Networks, Stochastic Optimization, Information Theory, Dynamical Systems.

Fall 2017 **Exchange Studies - Dongguk University**
Seoul, South Korea
Selected Coursework: Multiple View Geometry, Deep Learning.

2013 - 2016 **Electrical Engineering - Lund University**
Lund, Sweden
Selected Coursework: Multivariable Calculus, Control Theory, Mathematical Statistics, Numerical Analysis.

Experience

2022- **Senior Data Scientist - Avida Finance**
Stockholm, Sweden
As Avida's foremost technical expert on data-driven models, my responsibilities include:

- Planning all data science tasks in alignment with Avida's goals and leading the team in executing the tasks.
- Developing, implementing, deploying, monitoring and documenting Avida's data-driven models, including scorecards and models for IFRS9.
- Presenting models to non-technical forums including CXOs for executive decisions on deployment.
- Creating formal frameworks around model governance (guiding the company's practices for model development, implementation, monitoring, documentation).
- Designing, developing and implementing technical solutions for live model monitoring to continuously evaluate relevance and quality.

2019-2022 **Bioinformatician - University of Cambridge**
Cambridge, UK

- Long-term data science work on multiple biomedical projects (60+ datasets for 20+ different projects, typically juggling 3-7 projects at a time), with multiple weekly deliverables.
- Machine learning and statistics on terabyte-scale datasets, 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 machine learning to PhD students and postdocs at Institute.

Teaching and Mentorship

Teaching

- Developing curriculum and training materials for single-cell data analysis course in Cambridge (2022).
- 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

- 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.
- Onboarded junior group members in Cambridge and created code, documentation, pipelines and workflows to reduce their time-to-productivity.

For an updated version of this résumé with hyperlinks, see sharash.github.io/resume.pdf

Skills and Development

- **Programming Environments:** Python (Optimization example),
  R (Clustering evaluation package, Random Forest feature selection example),
  Julia (Outlier detection example, Optimization example), MATLAB, C++, Bash, SQL, 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-Studied Books and Courses:** Intermediate Linear Algebra, Computational Linear Algebra, Real Analysis,
  Combinatorics & Graph Theory, Reinforcement Learning.
- **Webpage:** sharash.github.io

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hyperlinks, see sharash.github.io/resume.pdf