Saeed Mirazimi

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Technical Skills

Software and Programming:

- **Python**: proficient in using **Pandas**, **statsmodels**, **scikitlearn** packages for Data Analytics/Science applications, proficient in developing reports using **Jupyter** notebooks
- **Database**: working knowledge of **MySQL**, **CouchDB**
- **Data Science/Analytics Platforms**: proficient in **Dataiku DSS** platform, **Tableau**, and familiar with data processing tools in **GCP** and
- **Matlab**: proficient, performed different simulations using it as a programming language and also using its toolboxes
- **Matlab Simulink**: proficient in using the toolbox, used for modeling Mechanical systems
- **C++**: basic knowledge of **C++** and object oriented programming, performed numerical simulations with software developed in **C++**
- **Operating Systems**: proficient in **Linux** and **Windows**
- **LaTeX**: proficient in **LaTeX** as well as **Word** as typesetting environments

Analytical Skills:

- Numerical Analysis
- Mathematical Modelling and Computation
- Programming
- Data Analysis and Statistics
- Machine Learning
- Statistics

Education

MSc, Applied and Computational Mathematics
Simon Fraser University (SFU), Burnaby, Canada — *Sep 2015-Sep 2018*

BSc, Mechanical Engineering
Sharif University of Technology (SUT), Tehran, Iran. — *Sep 2011- Jul 2015*

Research Projects

Simulation of Collective Dynamics of Active Swimmers — *SFU*
Master's Thesis, Computational Fluid Dynamics (**CFD**) Group — *Sep 2015 - Sep 2018*

- Studied active swimmers (bacteria, spermatozoa, etc) suspended in fluids
- Performed numerical simulation of the fluid-organism hydrodynamic interactions
- Developed numerical models in **C++** and **Python** for simulations

Timeseries Forecasting for Payment Analytics — *Control Mobile Inc., SFU, UBC*
Mitacs Accelerate internship, collaboration with industry partner — *Sep 2017-Dec 2017*

- Analysed customers' payment data, studied feasibility of project and prepared the research proposal
- Studied timeseries forecasting techniques for business applications
- Experimented and implemented forecasting techniques including ARIMA, Exponential Smoothing, and Cash Flow Forecast

Oil Reservoir Simulation — *Sharif Univ. of Tech., Iran*
Bachelor's Project — *Jan 2015 - May 2015*

- Studied porous media flow in reservoirs
- Performed oil reservoir simulation in MRST (Matlab Reservoir Simulation Toolbox developed by **SINTEF**)
- Studied the effect of Enhanced Oil Recovery (EOR) techniques (e.g. waterflooding) on production rate

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Industry Experience

Data Scientist-COOP *Vancouver, Canada*
Control Mobile Inc. *May 2017-Dec 2017*

- Set up Business Intelligence automated data pipelines to assist marketing team for improving customer acquisition
- Created executive dashboards for on-demand high-level reports of business KPI's
- Performed a thorough analysis of revenue under current and several potential pricing strategies
- Implemented statistical forecasting techniques for integrating as a feature into the product

Research Assistant *Burnaby, Canada*
Computational Fluid Dynamics Group, SFU *Sep 2015-Sep 2018*

- Contributed to the project "Modelling and Simulation of Fluid Flows with Industrial Applications" supervised by Professor John Stockie
- Developed numerical models in **C++** to simulate swimming organisms motion in fluids
- Studied dynamics of active swimmers using numerical simulations

Teaching Assistant *Canada, Iran*
Simon Fraser University, Sharif University of Tech. *Sep 2014-Apr 2017*

- Supported Calculus and Applied Calculus Workshops as Teaching Assistant (SFU)
- Ran tutorial sessions for Fluid Mechanics Course (SUT)
- Managed preparation classes for Scientific Olympiad competitions (Local High School)

Selected Courses

Numerical Linear Algebra *SFU*
Conditioning and stability analysis of numerical methods for solution of linear systems, direct factorization and iterative methods, least squares, and eigenvalue problems.

Analysis and Computation of Models *SFU*
Analysis of models from natural and applied sciences via analytical, asymptotic and numerical studies of ordinary and partial differential equations.

Numerical Solution of Partial Differential Equations *SFU*
Analysis and application of numerical methods for solving partial differential equations, including finite difference methods, spectral methods, finite element methods, and multi-level/multi-grid methods.

Computational Fluid Dynamics *SFU*
Formulation and application of finite difference methods for solving fluid flow problems. Classification of partial differential equations and formulation of well-posed problems. Discrete approximation of partial differential equations: stability, consistency, and convergence. Finite-volume formulations.

Advanced Numerical Analysis (Graduate Course) *Sharif University of Tech.*
Error analysis, numerical solution of equations, interpolation and approximation, numerical differentiation and integration, matrices and solution of systems of equations, numerical solution of ordinary and partial differential equations.

Probability and Statistics in Engineering *Sharif University of Tech.*
Statistics with emphasis on the applied probability models used in Engineering. Topics covered include samples, probability, probability distributions, estimation (including comparison of means), correlation and regression.