

Soroush Mortazavi

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EDUCATION

University of Waterloo

Waterloo, Canada

Master of Applied Science in electrical and computer engineering

Sep. 2022 – Sep. 2024

- Supervisor: [Dr. Yash Vardhan Pant](#) and [Dr. Sebastian Fischmeister](#)
- Thesis: [Robust Reinforcement Learning for Linear Temporal Logic Specifications with Finite Duration](#)
- **Best paper award** at the 37th Canadian Conference on Artificial Intelligence (CAIAC 2024)

Amirkabir University of Technology

Tehran, Iran

Bachelor of Science in computer engineering

Sep. 2017 – Mar. 2022

- Thesis: [Learning the Game of Gobblet Through Reinforcement Learning](#)

WORK AND RESEARCH EXPERIENCE

Data Scientist

London, UK (remote)

At [Open Power](#) ([Empowering Small Scale Generators Everywhere](#))

Oct. 2023 – Oct. 2024

- Developed and deployed an AI-powered tool using PyTorch for solar panel detection achieving over 80% accuracy on UK satellite imagery with vision transformers and custom CNNs.
- Designed and implemented machine learning models for solar energy forecasting achieving MAPE comparable to state-of-the-art methods while reducing computational overhead.
- Enhanced collaboration in a 6-person team using Notion, Git, DVC, MLflow, and pipelines optimizing workflows on GCP and Vertex AI to accelerate project delivery and model integration.

Research Assistant (CL2 lab)

University of Waterloo

Under the supervision of [Dr. Yash V. Pant](#) and [Dr. Sebastian Fischmeister](#)

Jun. 2022 – Sep. 2024

- [Developed an RL method using MCTS and neural networks for linear temporal logic specifications.](#)
- Gained full experience in problem-solving, testing, and publishing results in peer-reviewed conferences.

Research and Development Intern

Tehran, Iran

At [Roshan AI](#) ([knowledge enterprise](#))

Jul. 2020 – Oct. 2020

- Trained Persian word embeddings using Word2Vec, FastText, and GloVe.
- Developed a multi-threaded web crawler to gather 90GB of Persian web corpus, with extensive data cleaning.
- The resulting embeddings were used to improve the company's NLP application, boosting its performance.

Learning The Game of Gobblet through RL (B.Sc Thesis)

Under the supervision of [Prof. Safabakhsh](#)

Oct. 2020 – Sep. 2021

- Trained an agent from scratch using self-play, and implemented a user interface to play against it.

Research Assistant (deep learning lab)

Amirkabir University of Technology

Under the supervision of [Prof. Safabakhsh](#)

Mar. 2020 – Jul. 2020

- Experimented with LSTM, GRU, and custom RNN architectures, for time series stock market prediction.
- Preprocessed Iran's stock market data and developed an Ensemble prediction model, outperforming buy-and-hold and other strategies by over 10%.

HONORS AND AWARDS

International Master's Award of Excellence (IMAE) of 2,500 CAD/term: University of Waterloo

Graduate Research Studentship (GRS) Scholarship of 36,000 CAD/year: University of Waterloo

Ranked 19th/30K: In the national university entrance exam among 30 thousand students (2016)

Announced as an Outstanding Student: in Amirkabir University of Technology

SKILLS

Programming Languages & Scripting: Python, C++, C, Java, MATLAB, JavaScript, SQL

Developer Tools: Git, Kubernetes, Docker, DVC, CI/CD Pipelines, GCP, Google Colab, Vertex AI, Hadoop

Frameworks and Libraries: PyTorch, TensorFlow, Keras, MLFlow, Hugging Face, XGBoost, LightGBM, TensorBoard, Numpy, Scikit-learn, Pandas, Matplotlib, Seaborn, Tableau