

Shayan Amani

Data Scientist and Machine Learning Practitioner

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TECHNICAL SKILLS & TECHNOLOGIES

- **Languages:** Python, R, SQL, Java, C/C++/C#, MATLAB, Julia, Stan, LaTeX, Build Tools (Maven, Gradle)
- **Technologies:** Git, AWS (RedShift, EC2, S3, SageMaker), GCP (Maps), Unix-like CLI (macOS, CentOS, Ubuntu, RHEL), Web Servers (Apache, NGINX), API deployment (REST, SOAP), Android SDK, Graph database (Neo4j)
- **ML:** TensorFlow, PyTorch, scikit-learn, pandas, NumPy, Tableau, Optimization (Gurobi), Parallel computing (Dask)

EDUCATION

M.S. in Computer Science - UNIVERSITY OF NEW HAMPSHIRE

GRADUATED : MAY 2020

GPA 3.8 / 4.0 – **CEPS Scholarship Award** – Reinforcement Learning and Robustness Lab (RLsquared)

Research Topic: Distributional State Aggregation in Reinforcement Learning

The Ph.D. program prepared me with the right mindset and the skillset to pursue a career in the AI industry.

B.S. in Electrical Engineering - SHAHROOD UNIVERSITY OF TECHNOLOGY

GRADUATED: MAY 2015

GPA 3.2 / 4.0 – IEEE Student Member – RCMP Lab

Research Topic: Disc-Type Hysteresis Motors With Slotless Magnetic Stator Core

INDUSTRY EXPERIENCES

Data Scientist - TALON

MAY 2020 – PRESENT

- Deployed health data collection and processing pipeline enriching the company's data warehouse.
- Built an in-house medical billing knowledge graph to discover providers' relationships.
- Developed a siamese deep learning clustering solution to detect duplicates in the providers location database.

Data Science Intern - TALON

MAY 2019 – AUG 2019

- Trained and deployed hierarchical medical procedure classifiers which automated a manual task with 98% accuracy.
- Pre-processed data and developed unsupervised algorithm to cluster similar providers across the country.

Web and Mobile Developer - UNH ACADEMIC TECHNOLOGY

SEP 2017 – NOV 2017

- Maintained and developed features of the UNH's mobile applications (5 apps) within the Ionic framework.
- Deployed new modules on the UI side and authentication exchange along with test design.

Co-Founder & CEO - IOTON SOFTWARE DEVELOPMENT GROUP

MAY 2014 – AUG 2017

- Created Gramity (Telegramity), a feature-rich messaging app based upon Telegram API.
- Reached 200k MAU in 5 months within local app markets of 25 million active installations.
- Actively involved in the entire cycle of development, test, and distribution.

ACADEMIC EXPERIENCES

Graduate Teaching Assistant - UNIVERSITY OF NEW HAMPSHIRE

AUG 2017 – MAY 2020

- Conducted lab and recitation sessions for a myriad of different courses on Python, Java, and C# programming.

- Devised a control policy of invasive species in the New England region with a reinforcement learning approach.

- Proactively engaged and collaborated in the design, simulation, build and analysis process of a special electric motor.

- Guided a class of engineering mathematics as the teaching assistant in two consecutive semesters for +70 students.

PROJECTS

PASSAGE RE-RANKING WITH NEURAL BIDIRECTIONAL ENCODER (BERT)

- Trained BERT language model on TREC CAR dataset to learn the passage retrieval ranking task.
- Leveraged a pipeline of convolutional layers to fine-tune BERT which yielded 100% accuracy improvement.

TIME INTERVAL SELECTION IN NASA MAGNETOSPHERIC MULTISCALE MISSION

- Trained a classifier to explore prioritized times for which data should be downloaded from the satellite.
- Pre-processed time series and then applied model selection measures on Random Forest, Boosting, and SVM.

AFFECTSTWEETS – EMOTIONAL STATE TEXT CLASSIFIER

- Integrated NLP techniques to cluster tweets using language model smoothing in LuceneTM and pre-processing stages.

TELEGRAMITY – MOBILE MESSAGING APPLICATION

- Android messaging application created upon Telegram[®] API. Reached +200k active installations in 5 months.

PATENT & PUBLICATION

- **Patent:** S. Amani, A. Darabi, H. Tahanian, M. Sedghi, Combinational-flux disk-type hysteresis motor without axial-flux disk magnetic holder, IPO 139650140003008203 – **Granted: September 2017**
- **Journal Article:** A. Darabi, H. Tahanian, S. Amani and M. Sedghi, "An Experimental Comparison of Disc-Type Hysteresis Motors with Slotless Magnetic Stator Core," in IEEE Transactions on Industrial Electronics.

HONORS & AWARDS

Hack New Hampshire Hackathon - MOST INNOVATIVE TECHNOLOGY AWARD

FEB 2019

- Implemented a personalized place recommender neural network engine based on facial expression.

CEPS Graduate Scholarship - UNIVERSITY OF NEW HAMPSHIRE

MAR 2017

- Awarded along with direct admission to doctoral program (waived master degree requirement).

RELATED VOLUNTEER EXPERIENCES

Graduate Orientation Leader - GLOBAL STUDENT SUCCESS PROGRAM – NAVITAS

JAN 2019

- Directed a group of incoming students during the orientation week. Praised by the organizers at the end of program.

Senior Technical Translator - TELEGRAM MESSENGER LLP

MAY 2017 – PRESENT

- Collaborated with 7 other translators to translate and maintain a project of +12k strings.
- Admin privilege to apply translations instantaneously to 7 platform applications worldwide.

- Journal published across national universities and organizations in electrical engineering.