

# SHERVIN NASERI

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## BASIC INFORMATION

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## WORK EXPERIENCE

### Senior ML Engineer / Data Scientist

June 2020 - Sep 2021

Pardazesh Etelaat Kian

- Designed and deployed machine learning pipelines for vehicle plate recognition using Connectionist Temporal Classification (CTC), achieving near state-of-the-art results at the time.
- Developed a Farsi OCR system for scanned documents, incorporating paragraph and footer detection, and handling poem indentation styles.
- Built an image retrieval system leveraging perceptual similarity for large-scale datasets for a house rental marketplace.
- Engineered car detection and multi-object tracking algorithms for traffic camera surveillance and for counting traffic in each lane.
- Implemented a perspective-robust YOLOv4-based vehicle plate detection with custom regression.
- Developed a self-improving iterative watershed process for document de-warping.
- Led hiring processes and mentored junior data scientists.

### Senior Backend Engineer / Tech Lead

Dec 2016 - April 2020

Nikaat Corp

- Contributing to the design, development, deployment and technical decision-making in a fast-paced startup environment.
- Developed web services and APIs for applications such as Skenas, Atron, Mint, and Phosphor, primarily using the MEAN stack.
- Research and development of predictive models, including menstrual cycle forecasting and currency exchange rate prediction, leveraging time-series deep learning architectures.
- Managed DevOps workflows and ensured scalable system deployments.

### Python developer

March 2016 - Dec 2016

Vestaak

- Developed a personalized content recommendation engine using Python and Scikit-learn, leveraging data crawled from the Telegram Messenger API. Implemented collaborative filtering and content-based filtering algorithms.
- Assisted in the design and development of RESTful APIs using Python and Flask for efficient data ingestion and retrieval.

## EDUCATION

**MSc. Computer Science**  
University of Ottawa

Sep 2021 – Dec 2024

- GPA: 8.5/10
- Accepted *paper* at **EMSE2024**: Mohammad Hossein Amini, Shervin Naseri, Shiva Nejati: Evaluating the impact of flaky simulators on testing autonomous driving systems.

**MSc. Software Engineering**  
Sharif University of Technology (SUT)

- GPA: 16.37/20
- *Thesis*: Estimating Protein-Protein Interaction Network similarity through sampling
- *Project*: StackOverflow response time prediction using BERT (Dr. Abbas Heydarnoori)

**BSc. Computer Science**  
Amirkabir University of Technology (AUT)

- GPA: 16.11/20 (3.41/4.0)
- *Project*: Information Retrieval using deep-vector embeddings obtained from Word2Vec and Sent2Vec models (Dr. Saeedeh Momtazi).
- Accepted *paper* at **ICCG2019**: Zahed Rahmati, Sina Farahzad and Shervin Naseri, Counting Closed Billiard Paths.

## QUALIFICATIONS

- **Programming Languages**: *Python* (Scikit-Learn, TensorFlow, PyTorch, OpenCV, SpaCy, NLTK, Pandas, PySpark), *JavaScript* (Node.js, Angular, jQuery), *C++* (Boost, OpenGL)
- **Databases**: MySQL, MongoDB (and similar SQL and NoSQL DBs), Redis, Elasticsearch
- **DevOps**: Nginx, Docker & Docker Swarm, Ansible, Apache Spark

## PROJECTS

Some passion projects I've been working on:

- **Texture Modding Tools**: Automated Binary Domain texture modding using scripting and external tools to streamline content creation.
- **Video Compression Research**: Explored video compression techniques focusing on efficiency through temporal redundancy and bit-packing. (WIP)
- **Large Model Training Research**: Investigated methods to enhance large model training convergence through custom layer design.
- **Agent Interaction Language Design**: Designed a domain-specific language to define virtual agent interactions for improved software interoperability. (WIP)

## INTERESTS

Software Engineering, Algorithms, Machine Learning, Computer Graphics, Problem-Solving