

Parsa Mazaheri

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I'm an NLP Graduate student at UC Santa Cruz. I have 3.5 years of experience as a Software Engineer and 1.5 year of research experience in Machine Learning. I am passionate about Deep Learning and Software Engineering.

SKILLS

Programming Langs: Python, Java, C++, go, Javascript, SQL

AI: Pytorch, OpenCV, NLTK, Numpy, Pandas, NLTK, Matplotlib, Transformers, Data structures, Algorithms

Software: AWS, Lambda, S3, DynamoDB, ECS, RDS, Spring, Django, Flask, Django-Rest, RestAPI, React, HTML, CSS

Tools: PostgreSQL, MongoDB, Redis, Kafka, Git, Docker, Jira, Kubernetes, Grafana, Sentry, ci/cd,

EDUCATION

Masters Natural Language Processing, University of California, Santa Cruz Sep 2022 - Dec 2023
Project with **Cisco** on Interpreting Hallucination in Large Language Models

Bachelors Computer Engineering, K.N. Toosi University of Technology Sep 2017 - Jul 2021
B.S. Thesis: Compact Pedestrian Detection using YOLO

PROFESSIONAL EXPERIENCES

Software Engineer / ML engineer - University of California Jun 2023 - Now

- Creating a internal chatbot for UCSC system using LLMs for chat, grading, teaching assistant, etc. Designed a Model backend router for serving LLAMA-based model.

Sr. Software Engineer - Divar LLC (Karnameh) Jul 2022 - Sep 2022

- Refactored system design to cloud, improving content manager for showing better adds-on posts with concierge sale search result for 30M customers in Divar's Car division (Karnameh).

Team Lead - Tapsell Inc. Jun 2021 - Sep 2022
In charge of the Tapsell Reportage platform, **leading a team of 8 people.**

- Designed a new service** for reportage ads adding to ad services, and integrated with current systems at the time.
- Created a scalable automated predictive model for showing relevant ads, which improved click rate by 27%
- Used Gradient Boosting to optimize ad targeting to 45 million unique viewers and 28 Billion views/month.
- Worked on ad studio in the CM project, streamlining ad creation, enhancing art department efficiency, and minimizing turnaround time between designers and customers.

Software Engineer / ML Intern - Asre Danesh Inc Jul 2019 - Jan 2021
I worked in 2 departments, including software, and ML. (Fintech)

- ML: Designed the Credit Card scanner (OCR) – worked with attention, transformers, and model optimization.
- Backend: Backend design with Django and Spring for the crypto program wallet and trade pool.
- Architected advanced data processing techniques with Numpy to efficiently handle and analyze large volumes of coin data, enabling faster trade decisions.

RESEARCH EXPERIENCES

Machine Translation - University of California, Santa Cruz Apr 2023 - Jun 2023
Working with **Professor Ian Lane** on ASR with Wav2vec and Whisper models on OpenSLR dataset for improving multi-language ASR.

Machine Learning Intern - GMU, Virginia Jul 2021 - Dec 2021
Worked with **Professor Ziyu Yao** on a paper on **semantic parsing**. In this research project, we used a confidence score to find the uncertain parts in the agent's generated query on cross-domain databases and detect the correctness of the output. which improved agents' confidence in answers by 8%.

Machine Learning Intern - ADA Jul 2021 - Dec 2021
Engaged with the model, optimization. Improved Persian character detection in OCR by 15% using Attention-based decoding, and reduced instant OCR error rate by 10% through algorithmic enhancements.

ACCOMPLISHMENTS

- A board member of the K.N. Toosi University of Technology ACM Chapter ([link](#))
- ACM – ICPC International contest 2017 – 2nd place regional