

Pouria Azadehranjbar

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EDUCATION

B.Sc., Computer Engineering

2020 - 2024

Amirkabir University of Technology, Tehran, Iran

Thesis: Enhancing Lung Cancer Detection: A Study on Cloud-Based Model Interpretability, Accountability, and Privacy in Machine Learning with Resilience to Adversarial Attacks

Advisor: Prof. Alireza Bagheri

Total Average: 17.25/20 (GPA: 3.72/4)

PROFESSIONAL EXPERIENCE

Internship

Data Scientist Intern

05/2023-current

Tapsi (a ride-hailing company), Tehran, Iran

- HDBSCAN-based SecureRide Fraud Detection System
 - Conducted targeted data collection and processing, prioritizing cancellation rates, gross income, and average ride time to pinpoint potential indicators of fraud
 - Replaced conventional k-means clustering with HDBSCAN (Hierarchical Density-Based Spatial Clustering of Applications with Noise) during implementation, offering a more effective approach to grouping drivers and discerning those engaged in fraudulent activities
 - Leveraged domain analysts in the identification and subsequent blocking of fraudulent driver groups, leading to the prevention of ongoing fraudulent activities
 - Successfully identified and blocked a thousand fraudulent drivers, reduced the cancellation rate from 10 percent to an impressive 6 percent
- Dynamic pricing by deep contextual bandit algorithm
 - Developed a model for the complex reward function, adeptly managing numerous factors and variations within each state of the pricing problem
 - Implemented the experience replay method, effectively disentangling correlations in sequential samples, and streamlining stable updates to neural network parameters for enhanced efficiency
 - Successfully mitigated the percentage of ride proposals transitioning from previews to actual rides, attributed to perceived high pricing, achieving a notable reduction from 30% to 22%
 - Enhanced the acceptance rate of ride proposals by drivers, markedly increasing from 50% to 63%, resulting in a substantial increase in the number of active rides

Microservices Developer Intern

05/2022-09/2022

Blackbit, Tehran, Iran

- Developed an in-house application-interaction analytics service
- Implemented the sidecar pattern within Polyglot Microservices to enhance modularity.
- Developed sidecar services using Golang, leveraging its efficiency and concurrency features
- Implemented a master service in Python for aggregating data from sidecar services
- Utilized Pydoop and PySpark for data storage and analytic jobs within the master service
- Achieved synchronous communication among sidecar services using gRPC
- Adopted an asynchronous communication approach with Kafka for interactions between sidecar services and the master service

Teaching Assistant

Amirkabir University of Technology, Department of Computer Engineering

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|--------------------------------|-------------|
| – Software Engineering II | Fall 2023 |
| – Signals and Systems | Spring 2023 |
| – Micro-processor and Assembly | Fall 2022 |

TECHNICAL SKILLS

Language: Python, Java, C, Node.js, Go

Library/Framework: TensorFlow, Scikit-learn, NumPy, Pandas, Django

Data: MySQL, MongoDB, Hadoop ecosystem, Apache Spark,

Microservice Technology: Docker, Kubernetes, Kafka, gRPC

CERTIFIED COURSES

Supervised Machine Learning: Regression and Classification (DeepLearning.AI, Stanford, Online)

Advanced Learning Algorithms (DeepLearning.AI, Stanford, Online)

Unsupervised Learning, Recommenders, Reinforcement Learning (DeepLearning.AI, Stanford, Online)

REPRESENTATIVE UNIVERSITY COURSES

Computational Intelligence (course project: fuzzy autonomous driving car)

Principles and Applications of Artificial Intelligence (course project: the Pac-Man project)

Robotics (course project: SLAM)

Signals and Systems (course project: digital radio)

Information Retrieval (course project: information retrieval engine)

Algorithm Design (course projects: sort and graph algorithms comparison, the knapsack problem)

Applied Linear Algebra (course projects: linear regression, image compression)

Engineering Statistics

Data Structures and Algorithms

HONORS & AWARD

Ranked 180 among 200,000 students in Iranian National Universities' Entrance Examination 2020
Valedictorian at Mandegar Alborz High School 2018 - 2020

LANGUAGE PROFICIENCY

- **Persian**, native
- **English**, fluent
 - **TOEFL** – Overall: **105**
 - Listening: **29** Reading: **26** Speaking: **23** Writing: **27**
 - **GRE** – Overall: **329**
 - Quantitative: **168** Verbal: **161** Writing: **3**