# 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*

- 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

- 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

**Microservices Developer Intern** 05/2022-09/2022
*Blackbit, Tehran, Iran*

- Implementing a polyglot application-interaction analytic service
- Integrating a microservice into the existing ecosystem and gaining production experience

### Teaching Assistant

*Amirkabir University of Technology, Department of Computer Engineering*

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

## TECHNICAL SKILLS

**Language:** Pyhton, 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 150 among 150,000 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**