Keivan Jamali

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Education

GPA: 4.0/4.0 — **Bachelor of Science in Civil Engineering**, *Sharif University of Technology* | Tehran, Iran — *2020-24*

19.63/20 — **High School Diploma in Math and Physics**, *National Organization for Development of Exceptional Talents (Sampad)* | Yazd, Iran — *2014-20*

Related Courses

Related Courses: Intelligent Transportation Systems (ITS) (Currently) | Advanced Programming (Python) (Currently) | Project and Construction Management (Currently) | Economics of Engineering (Currently) | Traffic Engineering (18.3/20.0 - Top Mark) | Probabilities & Statistics in Civil Engineering (20.0/20.0) | Numerical Methods in Engineering (20.0/20.0) | Computer Application in Civil Engineering (18.1/20.0)

Virtual Courses: PyTorch for Deep Learning in 2023 Zero to Mastery - Udemy | Portfolio Constructions & Analysis - Coursera – 2023 | Python Supplementary programming - Faradars – 2022 | Differential Equations at MIT University- Instructors: Prof. Arthur Mattuck & Prof. Haynes Miller – 2021

Research Interests

Intelligent Transportation Systems (ITS) | Traffic Flow | Automated Vehicles | Smart City | behavior | Machine Learning

Research Experience

LOS Prediction Under Rainy Weather Conditions, *Research Assistant* (Dr. Z. Amini) | Tehran, Iran — *Oct. 2023 - Present*

- Developed and implemented Machine learning to predicting level of services under rainy weather in unseen regions.
- Planning to write a research paper on the project's findings and insights.
- Progress and updates on the project can be tracked on *KeivanJamali.com* & *Github*.

Comparative Analysis Of Gravity Model, Neural Network, And Graph Neural Network For Traffic Demand Modeling In Urban Areas, *Research Assistant* (Dr. Z. Amini) | Tehran, Iran — *Jun. 2023 - Present*

- Developed and implemented a traffic demand modeling framework using the Gravity model (GM), Neural Networks (NN) and Graph Neural Network (GNN) for accurate flow prediction.
- Contributing to a research paper on the findings.
- Documented the project details and outcomes on *KeivanJamali.com* & *Github*.

Teaching Experience

Statistics and Probabilities in Civil Engineering, *Teacher Assistant* | *Instructor: Dr. H. Abdoos* | Tehran, Iran — *Oct. 2023 - Present*

- Graded assignments, tests, and projects.
- Provided guidance and support to students.

Structural Analyses I, *Teacher Assistant* | *Instructor: Dr. H. Abdoos* | Tehran, Iran — *Oct. 2023 - Present*

- Graded assignments, tests, and projects.
- Provided guidance and support to students.

Introduction to Python, *Teaching* | Remote — *Dec. 13th 2021*

- Conducted virtual class, teaching Introduction to Python programming to first-year students.
- Received a student rating of 4.8 out of 5 with over 100 attendees.
- Presented programming examples and administered in-class tests. The codes are available on *Github*.

Skills

Programming Python (PyTorch, Pandas, Scikit-learn, Numpy, Kivy, matplotlib, etc.), PyCharm, Git, WordPress, LaTeX, HTML & CSS.
Civil Matlab, Mathcad, Maple, AutoCAD, Photoshop, Revit, CSI ETABS, Prezi, Microsoft Office
Soft Skills Teamwork, Leadership, Presentation, Public Speaking

Achievements

2023 **Ranked 2nd among 80 students**, Recognized as one of the top students at Sharif University of Technology. *Tehran, Iran*

2020 **Ranked in the Top 0.2% among 155,000 participants**, Competitive National University Entrance Examination. *Tehran, Iran*

2019 **Ranked 2nd**, Start-Up Event *Yazd, Iran*

Projects

Conceptual Review of the Persian Translation of "A Primer on Machine Learning Applications in Civil Engineering" by Paresh Chandra Deka *Nov. 2023 - Present*

Voluntary Project | Supervisor: Dr. M. Ahmadi *Tehran, Iran*

- Conducting a comprehensive review of the translated book to identify and correct conceptual errors.

Modeling of Azadi Tower Using Finite Element Method (FEM) *Feb. 2023 - Jun. 2023*

Computer Application in Civil Engineering (Course Project) | Instructor: Dr. M. Ahmadi *Tehran, Iran*

- Developed a 2D FEM model to simulate and analyze the structural behavior of Azadi Tower.
- Utilized Python to determine forces and displacements, and generated plots to visualize the results.
- Project is available on *KeivanJamali.com* & *Github*.

Modeling the Transfer of Pollution in the Persian Gulf *Feb. 2023 - Jun. 2023*

Environmental Engineering (Course Project) | Instructor: Dr. M. Danesh *Tehran, Iran*

- Developed a comprehensive model to simulate pollution diffusion and advection in the Persian Gulf.
- Project is available on *KeivanJamali.com* & *Github*.

Vision Modeling with PyTorch *Oct. 2023 - Present*

PyTorch for Deep Learning in 2023 Zero to Mastery - Udemy

- Currently engaged in the development of a vision-based model using PyTorch.
- Progress and updates on the project can be tracked on *GitHub*.

A Software for Calculating Variance *Jan. 2021 - Jun. 2021*

Physics Lab 1 | Personal Project

- A graphical program designed with Kivy library.
- The program and source code is available on *GitHub*.

Languages

English Proficient
Persian Native

Hobbies

Playing Piano,
Playing Flute,
Cooking,
Playing Ping-Pong,

References

Dr. Zahra Amini, Assistant Professor | Tehran, Iran
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Prof. Mohammad Mehdi Ahmadi, Professor | Tehran, Iran
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Prof. Mohsen Ghaemian, Professor | Tehran, Iran
Email: ghaemian@sharif.edu

Mr. Hatef Abdoos, Instructor & Ph.D. candidate | Tehran, Iran
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