





Erfan Mirhosseini

Curriculum Vitae

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 Google Scholar

Education

2018-2022 **M.Sc. in Electrical Engineering**, *Communication Systems*, Amirkabir University of Technology, Polytechnique of Tehran

Thesis title Crowdsensing Data Prioritization Using Machine Learning Methods

The scheme leverages matrix completion and future prediction techniques to achieve high-precision predictions using sparse historical data, effectively addressing the limitations imposed by linear assumptions regarding spatio-temporal relationships.

Supervisor Dr. Vahid Pourahmadi

2012-2018 **B.Sc. in Electrical Engineering**, *Electronics*, Islamic Azad University South Tehran Branch

Thesis title Developing an advanced cane using ultrasonic sensors

Supervisor Dr. Farhad Razaghian

Publications

2020 Abdolrasoul Sakhaei Gharagezlou, Mahdi Nangir, Nima Imani, and **Erfan Mirhosseini**. "Energy Efficient Power Allocation in Massive MIMO Systems with Power Limited Users." Proceedings of the 4th International Conference on Telecommunications and Communication Engineering. ICTCE 2020. Lecture Notes in Electrical Engineering, vol 797. Springer, Singapore. (Published)

Research Interests

- ML/DL and Reinforcement learning
- Computer Vision
- Digital Signal Processing
- Federated Learning Mobile
- CrowdSensing (MCS)
- Internet of Things
- Applied Statistics

Projects

Academic Projects

2020 **Wireless network-based COVID-19 hotspot detection system**, *Wireless Communication Systems course project*

- Developed a system that utilizes wireless network data to identify areas or locations with a high concentration of COVID-19 cases.

2019 **IEEE scientific paper recommendation system**, *Statistical Learning Theory course project*.

- Gathered keywords by scraping the IEEE website and utilized these abstract keywords to develop a recommendation system.

Work Projects

- 2017 **Node.js Application for Efficient Price Comparison and Cost Savings**
○ Developed a Node.js application to compare prices of products across three online shopping websites, providing users with cost-effective suggestions.
- 2016 **Chat support module for real-time customer assistance**
○ Developed an efficient chat support module that leverages Socket.IO to ensure real-time and fast customer assistance.

Honours and Certificates

- 2018 Ranked 220th among 23000 (top 1%) students in Electrical Engineering National Universities Entrance Exam (Konkour) for Graduate Studies.
- 2018 Received full Scholarship from Amirkabir University (tuition fee waiver).
- 2019 **Deep Learning with TensorFlow**, Sharif University, (14 Hours)
- 2018 **Python for DataScience**, Tehran University, (24 Hours)
- 2017 **Cisco Certified Network Professional Switching (CCNP-S)**, Arjang Higher Education Institute (Remis Advanced Training Center), (50 Hours).
- 2017 **Cisco Certified Network Professional Routing (CCNP-R)**, Arjang Higher Education Institute (Remis Advanced Training Center), (50 Hours).
- 2016 **Cisco Certified Network Associate Routing and Switching (CCNA-R/S)**, Cybertech Co. (the Leader in IT and Training), (60 Hours).

Technical Skills

Languages	English (TOEFL iBT (Overall): 96), Farsi (Native), French (Can understand)
Programming Languages	Python (Advanced), R (Familiar), MATLAB (Advanced), C++ (Familiar), ARM(Intermediate), JavaScript (Intermediate)
Softwares	Microsoft Office (Advanced), \LaTeX (Advanced), Photoshop (intermediate)
Operating Systems	Windows, Linux (Ubuntu)

Relevant Academic Coursework

- Wireless Communication Systems, (3/4)
- Digital Signal Processing, (3/4)
- Channel Coding, (4/4)
- Advanced Theory of Telecommunication, (3/4)
- Ranked in the TOP 15% of Statistical Learning Theory
- Ranked in the TOP 20% of Stochastic Processes

Interests/Hobbies

- Gaming
- Watching movies
- Swimming
- Playing chess
- Reading
- Traveling

References

- Vahid Pourahmadi **Assistant Professor**, Department of Electrical Engineering
Amirkabir University of Technology(Tehran Polytechnic), Tehran, Iran.
Email: v.pourahmadi@aut.ac.ir
- Hamid Sheikhzadeh **Associate Professor**, Department of Electrical Engineering
Amirkabir University of Technology(Tehran Polytechnic), Tehran, Iran.
Email: hsheikh@aut.ac.ir