Mohammad Niroomand

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Department of Computer Engineering,
K. N. Toosi University of Technology, Tehran, Iran

RESEARCH INTERESTS

- Non-Terrestrial Network (NTN)
- 5G & 6G Networks
- Wireless and Mobile Networks
- Reinforcement Learning

EDUCATION

K. N. Toosi University of Technology Sep 2024 – Current
M.Sc. in Computer Engineering, Minor in Computer Networks Tehran, Iran

Courses: Advanced Computer Networks, Wireless Networks, Multimedia Networks, Performance Evaluation of Computer Systems, Network Management, Advanced Network Security, Cloud Computing, Distributed Systems

Seminar Title: The Role of Non-Terrestrial Networks (NTN) in the Expansion of 5G and Beyond.

Master's Thesis (Supervisor: Prof. Kaebeh Yaeghoobi):

- Thesis Title: Performance optimization between terrestrial 5G and LEO satellite networks using reinforcement learning.

University of Guilan Sep 2019 – Jul 2024
B.Sc. in Computer Engineering Rasht, Iran

Notable Courses: Computer Networks (4/4), Embedded and Real-Time Systems (4/4), Special Topics 1 (Internet of Things) (4/4), Internet Engineering (4/4), Computer Architecture (4/4), Algorithms Design (4/4), Signal and Systems (4/4)

Bachelor's Project (Supervisor: Prof. Mohammad Salehi):

- Project summary: Development of a responsive web based weather client application, and leveraging AccuWeather API for real-time Weather data retrieval, forecast visualization and user centric interactive features, together with their design.
- GPA: 4/4

Tadbir High School Sep 2018 – Sep 2019
High School Diploma in Mathematics & Physics Qazvin, Iran
- Major GPA: 4/4 (19.10/20)

HONORS AND AWARDS

- Accepted into the Master's program at K. N. Toosi University of Technology in Tehran, **one of the top three institutes of technology** for Computer Networks and Telecommunication Systems in Iran.
- **Ranked in the top 3 %** among more than 16,000 participants in the Iranian National University Entrance Exam (Konkour) for M.Sc. of Computer Engineering, February 2024.
- **Ranked in the top 4 %** among more than 150,000 participants in the Iranian National University Entrance Exam (Konkour) for B.Sc. of Computer Engineering, July 2019.
- Received competitive job offers as **Network Specialist at the Central Bank of Iran** and **Infrastructure Engineer at MTN Irancell**.
- **National LEGO Robotics Team Member** & Qualifier for the 2015 World Robot Olympiad (WRO).
- **Full tuition waiver scholarship** - University of Guilan, 2019-2024

Academic Projects

- **Router Queue Performance Analysis** [Link]

  Simulated and analytically evaluated router queuing systems to analyze packet delay and loss using queuing theory.

- **Hardware Software Co-Design** [Link]

  Design and Implementation of a 6-bit Processor with Programming Capability.

- **Embedded and Real-Time Systems** [Link]

  Design and simulate an air conditioning system using Proteus. Measure temperature and humidity from three different points using sensors and control a heater, a cooler, and a humidifier accordingly.

- **Microprocessors and Assembly Language** [Link]

  Design a traffic light control system at an intersection using microprocessors and assembly language. Simulate the lights in Proteus with LEDs and implement a 7-segment countdown timer.

- **Sentiment Analysis** [Link]

  Build both traditional machine learning models (Naïve Bayes/Logistic Regression) and a TensorFlow neural network for sentiment analysis on the Amazon reviews dataset.

Teaching Experience

- **Teaching Assistant** at K. N. Toosi University of Technology — Sep 2025 - Currently
  - Network Management (Fall 2025) — *Supervisor: Prof. Kaebeh Yaeghoobi*
  - Advanced Computer Networks (Fall 2025) — *Supervisor: Prof. Kaebeh Yaeghoobi*
- **Teaching Assistant** at University of Guilan — Sep 2019 - Jul 2024
  - Embedded and Real-Time Systems (Spring 2024) — *Supervisor: Prof. Mohammad Salehi*
  - Algorithm Design (Spring 2023) — *Supervisor: Prof. Aida Khozaei*
  - Advanced Programming (Spring 2022) — *Supervisor: Prof. Aida Khozaei*

Courses

- **Sample-based Learning Methods** | Verification — Currently pursuing
  University of Alberta
- **Fundamentals of Reinforcement Learning** | Verification — Dec 2025
  University of Alberta
- **CISSP Certified Information Systems Security Professional** | Verification — Jul 2025
  Packt
- **Supervised Machine Learning: Regression and Classification** | Verification — Dec 2024
  DeepLearning.AI
- **CCNA 200-301** | Verification — Nov 2024
  Arjang Institute of Higher Education
- **CEH (Certified Ethical Hacker)** | Verification — Apr 2024
  Maktabkhooneh
- **LEGO Education and Advanced Robotics Training** | Verification — 2014-2015
  LEGO Education Institute

Skills

- **Programming Languages:** Python, Java, C/C++, VHDL/Verilog, Solidity
- **Developer Tools:** EVE-NG, GNS3, Cisco Packet Tracer, Paessler PRTG, Wireshark, Proteus, VS Code, Linux, PyCharm, IntelliJ, Git, Github, Slack, LaTeX
- **Web Development:** React, Bootstrap, HTML/CSS, Tailwind CSS, JavaScript, MySQL
- **English:** IELTS: To be taken soon

Personal Interests

- **Music:** Professional piano player with two years of teaching experience.
- **Literature & Arts:** Interested in poetry and literature, with experience in film, theater, and book criticism.
- **Social & Environmental Engagement:** Active collaboration with charitable and environmental institutions.