Fatemeh Razaqnejad

razaqnejad@gmail.com | razaqnejad.github.io/a/ | razaqnejad | razaqnejad | https://dribbble.com/razaqnejad

SUMMARY

A multidisciplinary computer engineer specializing in software development, game design, and robotics, with a passion for integrating technology and creativity to craft immersive digital experiences. With hands-on experience in UI/UX, machine learning, and interactive systems, I bridge the gap between engineering and design to develop next-generation interactive environments. Eager to advance my expertise in game and interactive design through academic research, leveraging my diverse technical background to drive innovation in the field.

EDUCATION

K.N. Toosi (Khajeh Nasiredin Toosi University of Technology)

Tehran, Iran

B.S. in Computer Engineering

Aug. 2019 - Feb. 2024

- **Last 2 years GPA: 16.30/20**
- **Bachelor's Thesis:** Through the Ordinary: 2D Platformer Game Using Unity and C#
- **Relevant Coursework:**
  - Artificial Intelligence & Expert Systems – **16.18/20**
  - Graph Theory & Algorithms – **19/20**
  - Software Engineering – **19/20**
  - System Analysis & Design – **19.5/20**
  - Web(Internet) Engineering – **16/20**
  - Digital Electronics & VLSI – **17.05/20**
  - Computer Aided Digital System's Design – **15.25/20**

Farzanegan 2 - National Organization for Development of Exceptional Talents (Sampad)

Tehran, Iran

Diploma of Education, Mathematics

Oct. 2016 - Jun. 2019

- **GPA: 17.84/20**

CERTIFICATES

IELTS Academic Certificate (Band 7.0)

IELTS Official

Issued Nov 2024

Foundations of User Experience (UX) Design

Google - Coursera

Issued Sep 2023

Supervised Machine Learning

DeepLearning.AI - Stanford University - Coursera

Issued Apr 2024

SKILLS

Design Skills	Wireframing, Prototyping, User Interface Design, User Experience Design, Graphic Design, Fine Art
Design Tools	Figma, Adobe Illustrator, Adobe Photoshop, Procreate, Blender
Technical Skills	Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Web Design & Development, Embedded System Design & Development, Software Development
Technical Tools	Git, Jupyter Notebook, VS Code, Unity Game Engine, Arduino, Proteus, Altium Designer, SolidWorks, TensorFlow, PyTorch, OpenCV, Scikit-learn, Pandas, NumPy, Matplotlib
Programming Languages	C#, C++, C, Python, Java, HTML, CSS, JavaScript

INTERACTIVE PROJECTS

2D Platformer Game: Through the Ordinary

GitHub

Bachelor's Thesis - Game Development

2024-2025

- Developed a 2D platformer game with dynamic health, environmental interactions, and skill upgrades.
- Designed a narrative-driven experience reflecting psychological growth through interactive storytelling.

Droplinked Web3 Product Design

Droplinked - Dribbble

UI/UX & Visual Identity

2024-2025

- Created a cohesive visual identity, enhancing brand recognition and UI aesthetics.
- Designed user-centered Web3 platforms for products focusing on specific group of users experience.

MACHINE LEARNING PROJECTS

Comparative Analysis of Dimensionality Reduction Techniques

GitHub

Machine Learning - Linear Algebra

2024-2025

- Implemented and compared PCA, Isomap, LLE, and Laplacian Eigenmaps for high-dimensional data visualization.
- Evaluated computational efficiency and feature preservation across datasets.

Facial Emotion Recognition Using CNNs

GitHub

Deep Learning - Computer Vision

2024

- Built a real-time facial emotion detection system using CNN architectures trained on emotion datasets.
- Optimized model performance by hyperparameter tuning and data augmentation techniques.

Email Spam Detection Using Naive Bayes

GitHub

Machine Learning - Natural Language Processing

2023

- Developed a spam classification model using the Naive Bayes algorithm with feature engineering.
- Implemented precision-recall evaluation metrics to assess classifier effectiveness.

Data Transmission with Go-Back-N ARQ and CRC Error Detection

GitHub

Computer Networks - Network Protocols

2022

- Developed a reliable data transmission protocol with error detection using CRC under simulated conditions.

EMBEDDED SYSTEMS PROJECTS

Voice Signal Processing and Encoding Techniques

GitHub

Signal Processing

2022

- Developed an audio analysis tool for real-time voice processing using PCM encoding.
- Implemented frequency domain analysis for speech feature extraction.

Rescue Line Follower Robot

Mossito Robotics Academy

Robotics - Embedded Systems

2021

- Built an Arduino-based autonomous line-following robot with PID control for navigation.
- Designed and tested obstacle avoidance strategies using IR sensors.

Infrared and Ultrasonic Sensor-Based Obstacle Avoidance System

Mossito Robotics Academy

Embedded Systems - Sensor Integration

2020

- Developed an autonomous robot integrating ultrasonic and infrared sensors for navigation.
- Implemented real-time obstacle avoidance algorithms for dynamic environments.

Junior Soccer Robot

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Robotics - Embedded Systems

2018

- Designed and programmed an autonomous soccer-playing robot with computer vision for decision-making.

Autonomous Housekeeping Robot

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Robotics - Smart Automation

2018

- Developed a smart housekeeping robot with assistive features for individuals with disabilities.

RESEARCH EXPERIENCE

Comparative Analysis of Dimensionality Reduction Techniques *K.N. Toosi University - GitHub*

Machine Learning - Dimensionality Reduction *2024 - 2025*

- Implemented and compared PCA, Isomap, LLE, and Laplacian Eigenmaps for decomposing high-dimensional data.
- Analyzed the effectiveness of different techniques on sample and realistic data.

Functionality of Different Measuring Methods in Robots *Mossito Robotics Academy*

Robotics - Sensor Technology and Measurement *2022*

- Conducted a comparative study on the efficiency of laser, infrared, and ultrasonic sensors for robotic measurements in real-world environments.
- Developed and tested sensor integration methods to optimize robot perception in navigation and object detection.

Comparison of Accelerometers vs. Gyroscopes for Robot Positioning *Mossito Robotics Academy*

Robotics - Motion and Stability Analysis *2022*

- Investigated the accuracy, drift, and stability trade-offs between accelerometers and gyroscopes for real-time robot positioning.
- Developed an analysis framework to quantify errors and improve localization algorithms for the robots.

ACADEMIC EXPERIENCE

Teaching Assistant - Fundamentals of Programming *Tehran, Iran*

K. N. Toosi University of Technology *Sep 2021 - Aug 2022*

- Developed supplementary materials and mentored over 50 students
- Designed structured programming exercises and debugging tasks to enhance students' problem-solving skills.
- Held office hours and conducted review sessions to clarify course concepts and improve student comprehension.

Robotics & Programming Trainer *Tehran, Iran*

Mositto Robotics Academy *Aug 2020 - Aug 2022*

- Instructed programming, electronics, and robotics to two groups of under-13 and 13+ student.
- Developed and implemented project-based lessons focusing on embedded systems, sensor integration, and automation.
- Mentored students in robotics competitions, guiding teams in designing and programming autonomous robotic systems.

WORKING EXPERIENCE

Product Designer *Remote*

Droplinked (FlatLay Inc.) *Aug 2022 - Jan 2024*

- Worked as the only, and later the lead designer of the team.
- Accompanied the team during the journey from a startup to a big company.

Junior UI/UX Designer *Remote*

Freelance *Jun 2022 - Jul 2023*

- Led product design projects, enhancing UX and interface design across platforms.
- Developed high-fidelity UI mockups, wireframes, and interactive prototypes.

Robotics Engineer *Tehran, Iran*

Mositto Robotics Academy *Aug 2020 - Aug 2022*

- Developed and documented research on robotics technology and automation.
- Mentored competition teams, securing 3rd place in RoboCupJunior Rescue Simulation.
- Organized robotics workshops, training young learners in hands-on projects.

HONORS & AWARDS

International

2021 **3rd Place Mentor,** RoboCupJunior Asia-Pacific Rescue Simulation (CoSpace) Primary (Virtual) *Aichi, Japan*

Domestic

2019 **2nd Place,** RoboCup Iran Open Junior Demo Common Challenge *Tehran, Iran*