Matt Mansouri

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PROFILE:

Software Developer with a Master's degree specializing in AI, Robotics, and Data Science. Proficient in Python, C++, MATLAB, and SQL, with experience in developing advanced software solutions and applying machine learning techniques to enhance efficiency and performance.

WORK EXPERIENCE

Programmer Tier II at Outlier (Freelance)   (Nov 24-Current)
- Engaging in rewriting and **debugging** tasks to improve code quality and functionality.
- Conducting targeted tests to identify and address potential model weaknesses in.

Software Programmer at MSN Transport (Amazon Division)   (Nov 24-Feb 25)
- Developed a **LLM agent** to assist management in improving driver performance.
- Utilized **data science techniques** to **visualize** and assess driver performance, providing insights that drove operational improvements.
- Enhanced existing software by adding new features to optimize operational efficiency.

Rogers Care Agent Representative (Part-time) at IOSolutions   (Apr 23-Nov24)
- Provided exceptional customer service, utilizing **problem-solving** skills to efficiently resolve customer inquiries.
- **Collaborated** with team members and **managed time** effectively to meet performance targets and enhance overall customer satisfaction.

Robotics Software Engineer at Talighsazan Novin   (Jun 22-Dec 22)
- Collaborated on developing **image processing algorithms** for detecting color imperfections on car bodies.
- Integrated **machine learning** techniques to improve detection accuracy by over 15%.
- Integrated advanced machine learning algorithms for improved detection accuracy.
- Implemented **real-time** inspection systems using advanced sensors and cameras and processing units.

Robotics Developer at Talighsazan Novin   (Jan 19-Jun 22)
- Designed and programmed **collaborative robotic systems** using **ROS** and **AI-driven** interfaces.
- Developed safety protocols with sensors (**LiDAR**, cameras) for safe **human-robot interaction**.
- Optimized workflow efficiency by **programming cobots** for complex manufacturing tasks.

Mechanical Engineering Intern at Talighsazan Novin   (Apr 18-Jan 19)
- Designed **3D models** using **SolidWorks** and collaborated on assembly projects.
- Conducted **simulations** and **analyses** using **MATLAB**, **ANSYS**, and **MSC ADAMS**

SKILLS

Programming: Python, Matlab, C++, ROS, GIT, SQL
Libraries and Frameworks: PyTorch, TensorFlow, ScikitLearn, NumPy, Pandas, OpenCV, Docker
OS: Linux, Windows, Mac
Other: LLM, Clouding, Embedded programming, Object-Oriented Programming, Statistic, Finance, Trading, CI/CD
Languages: Persian, English, French (Intermediate)

EDUCATION

Master of Engineering in Mechanical Engineering (Jan 23-Jun 24)

Concordia University

- Relevant courses: **Applied AI**, Robotics, Micro-Controller, Multi-Agent Control Systems, Industrial Automation

Bachelor of Science in Mechanical Engineering (Sep 17-Feb 22)

University of Kashan

- **Ranked 2nd** among students of Mechanical Engineering based on GPA in the last two years (**3.82/4**)
- Research Assistant to work on free vibration analysis of nanoplate reinforced with GPL
- Teaching Assistant of Linear Control and Engineering Mechanics Statics for 4 terms
- Course Instructor of MATLAB

AFFILIATIONS

Head of the University Robotic Scientific Association at the University of Kashan (Jul 20-Jul 21)

- Led a scientific group and **multi-tasking** management

Member of the University Mechanic Scientific Association at the University of Kashan (Jul 19-Jul 20)

ACADEMIC PROJECTS

- Venue Classification with Decision Tree (Supervised and Semi-Supervised) and CNN
- Robust PID consensus-based formation control of nonholonomic mobile robots affected by disturbances
- QBall-X4 Quadrotor Helicopter Platform Modeling, Analysis, and Simulation
- Microcontroller Implementation and Software Development for a Semi-Autonomous Robot Car
- Laser Fighter Robot
- Simulation of car chassis in MATLAB, Simulink, and Simscape
- Forward and Inverse Kinematic, Dynamic Analysis, Path Planning, and Control of the Puma Robot using MATLAB

ADDITIONAL TRAINING AND CERTIFICATIONS

- The Complete SQL Bootcamp: Go from Zero to Hero (Jul 24)
- Robot Studio (May 24)
- ROS2 For Beginners (Apr 24)
- Applied Control Systems 1: autonomous cars: Math + PID + MPC (Mar 23)
- Mechatronics Technician (Jul 22)
- Modern Robotics (Mar 22)
- Neural Networks and Deep Learning by Andrew NG (Feb 22)
- Machine Learning by Andrew NG (Jan 22)