Rohan Mahesh Rao

Education

- **PES University** — Bengaluru, India
  Bachelor of Technology, Electronics and Communication Engineering; GPA: 3.1 / 4.0 — *May 2020 – Present*

Experience

- **PESU I/O** — Bengaluru, India
  Management Executive — *May 2021 - Oct 2021*
  - **Curriculum Development and Recruitment**: Was part of the curriculum development team for the peer to peer E-learning services offered to all students at PESU. Was also responsible for recruitment of student SMEs and course tutors
  - **Market Research and Business Development**: Was part of the team that analysed and reorganised the company's business strategy and cost model to optimize marketing/outreach and yearly profit
- **PES Innovation LAB (Formerly Microsoft Innovation Lab)** — Bengaluru, India
  Summer Intern — *Jun 2023 - Aug 2023*
  - **Intra-Warehouse Package Management using Collaborative Robotics**: Worked on the integration of state of the art and novel multi agent RL algorithms for autonomous robot manipulation to handle package logistics in a warehouse (package deliveries and order queuing)
  - **Team Management**: Managed a team of 4 interns for the ongoing project. Was responsible for code review
- **Centre for Robotics Automation and Intelligent Systems, PES University** — Bengaluru, India
  Intern — *Jul 2023 - Aug 2023*
  - **Reinforcement Learning + Legged Robots**: Studied, integrated and tested novel reinforcement learning algorithms with quadrupedal robot simulations to successfully teach the robots to walk and adapt to different terrains
- **Teaching Assistant - PES University** — Bengaluru, India
  Digital Image Processing - 1 — *Aug 2023 - Present*
  - **Matlab Programming**: Responsible for assisting 5th semester ECE students on implementation of various image processing concepts using Matlab
  - **Tests and Grading**: Responsible for conducting projects/quizzes and grading students on the same

Projects

- **ML Driven Audio Visualiser**: Music genre classifier interfaced with an controllable LED array, to obtain real time music visualisation and lighting patterns based on the song playing
- **ML Assisted De-speckling of Images**: Used various machine learning models (both regression and classification) to predict optimum filter sizes for image denoising, based on the amount of noise present in the image. Won the best project award for the course Digital Image Processing (UE20EC317)
- **Career Guidance System for Soldiers**: Created and deployed an ML based career guidance system, specifically for the ex-military. Used physical and mental performance data (collected during the time of service) to suggest career options after the military tenure of soldiers
- **Analysis, Diagnosis and Encryption of Blood Work Data using ML and Blockchain**: Developed a module that utilizes optical character recognition to extract information from blood reports for diagnosing various diseases. User data was stored securely using blockchain on the Ethereum Mainnet deployed on Polygon, ensuring encryption of personal data. Accuracy : 92 percent

Programming and Tech

- **Languages**: Python, Javascript, Matlab, C
- **Technologies and Frameworks**: Node.js, Express js, Docker, NumPy, Tensorflow, Pandas, ROS, OpenCV
- **Other Tools**: Git(CLI), GitHub, LaTeX, ClickUp
- **Currently Learning**: AWS, Apache Kafka, MongoDB