Rohan Russel Nedungadi

Graduate Computer Science Student

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EDUCATION

Master of Computer Science, University of Illinois Urbana-Champaign (UIUC)   **Aug 2022 — Dec 2023**

B.Tech in Computer Science and Engineering, Mahindra Ecole Centrale-JNTU, CGPA: **9.34/10.00 (Top 5%)**   **Aug 2017 — June 2021**

EXPERIENCE

Machine Learning Engineer (Computer Vision)   **Nov 2021 — June 2022**
GuiseAI - A Computer Vision Startup, Reporting Manager : Mr Naga Rayapati (CEO)   Rolla MO, USA (WFH)

- Specialized in development of "AI on the Edge" with microprocessors and microcontrollers, for Computer Vision algorithms.
- Designed real time docker based backend pipelines and post - Object detection - logic. Requirements included API servers with local and remote DBs, multiprocess/threads, real-time socket communication and full stack development with a remote UI.
- Was designated as "Release Manager" for the entire DevOps cycle of development and delivery of the NaviSense Project.
- Appointed point-of-contact for the "Partner Connect" partnership with Red Hat, for distribution of applications through OpenShift.

Jr. Machine Learning Engineer (Computer Vision)   **Jun 2021 — Oct 2021**
GuiseAI - A Computer Vision Startup, Reporting Manager : Mr Naga Rayapati (CEO)   Rolla MO, USA (WFH)

- Based on Co-Op performance, was accepted into the Core R&D team, to develop CV and AI solutions for B2B clients.
- Worked on projects such as People Count, Age and Gender, Face Recognition and Automatic Number Plate Recognition.
- Developed a full-stack MLOps automation tool with CV algorithms for generating datasets, cutting down week-long jobs to hours.

Teaching Assistant (Part Time)   **Sep 2021 — Dec 2021**
Mahindra Ecole Centrale, Advisor: Dr Prafulla Kalapatapu (Academic Associate CSE)   Hyderabad TS, India (WFH)

- Delivered lab sessions for the course on Database Management Systems as a TA.
- Designed, organized and reviewed assignments and course projects, mentoring students for the same.

INTERNSHIPS

Machine Learning Intern (Co-Op)   **Feb 2021 — May 2021**
GuiseAI - A Computer Vision Startup, Mentor: Mr Naga Rayapati (CEO)   Rolla MO, USA (WFH)

- Optimized existing Object Detection and Tracking solutions with clustering algorithms for faster inference.
- Explored and incorporated multiple deployment tools such as Kafka into existing pipelines to deliver scalable solutions.

CyberVSR (Research Program)   **May 2020 — Jul 2020**
Rochester Institute of Technology, Advisor: Dr Shanchieh Yang (Director of Global Outreach, GCI)   Rochester NY, USA (WFH)

- Assisted in exploring Bro/Zeek as an effective network analyzer and NIDS for ML based cybersecurity.
- Displayed its capabilities in clustering network data and designed a GitHub guide. ⌨

Summer Engineering Intern   **May 2018 — Jul 2019**
Avenue E-commerce Ltd (R&D), Mentor: Mr Vikas Roy (Chief Front-end Architect)   Mumbai MH, India

- Authored a white paper - **Exhaustive analysis of customer purchase patterns on an e-commerce platform**
- Designed ML models for implementing the ideas in the paper to evaluate customers and achieved a 92% accuracy.

SELECT PROJECTS

EyeD, Computer Vision/AI, ⌨ — Mahindra Ecole Centrale   **Jan 2021 — Mar 2021**
- Used computer vision algorithms (OCR and MTCNN) to detect image and ID from the ID card for face recognition.

Poke2, MERN Stack, ⌨ — Mahindra Ecole Centrale   **Jan 2020 — May 2020**
- Developed a full stack restful web-app based 1v1 game using ReactJS, NodeJS, Heroku PaaS, GitLab CI/CD & Mongo Atlas. Play Poke2

Rshell, OS/Systems, ⌨ — Mahindra Ecole Centrale   **Aug 2019 — Dec 2019**
- Built a unix based custom shell in C (Rohan's Shell) that supports all UNIX shell capabilities and is customizable.

Select Studies

Classical Image Processing and DL Techniques in image tagging and retrieval ⍉, Dr Raghu K. Neeliseti   **Aug 2020 — Dec 2020**
- Developed a survey and proof of concept with multiple image processing algorithms for information retrieval. (Senior Yr. thesis)

Analysis of Power consumption for Wireless Sensor Networks (WSNs) ⍉, Dr Rama Murthy   **Jan 2020 — May 2020**
- Conducted an analysis of power consumption in WSNs, with multiple compression techniques vs transmission. (Junior Yr. thesis)

Hackathons

E-Summit Startup Sprint (3rd), Mahindra Ecole Centrale — Distributed Compute Fabric   **Jan 2019**
- Designed an application that can use idle compute cycles on mobile phones for distributed computation.
- Implemented with the help of efficient map and reduce algorithms along with RESTful HTTP APIs.

Dell Hack2Hire (1st), Dell Technologies - ML/AI based Cart Conversion, ⍉   **Oct 2018**
- Proposed and presented a redesign of the Dell website with ML integration such as SVMs for a Digital Footprint and SOTA recommender systems, to offer a smoother experience which in turn would increase cart conversions rate.
- Offered an internship at Dell Technologies.

Skills & Frameworks

Languages	Python (Advanced), JavaScript(Intermediate), C (Intermediate), C++ (Intermediate), Java (Intermediate), GoLang(Beginner)
Deeplearning	PyTorch, Keras, TensorFlow, Onnx, Tflite, OpenCV, OpenVino, YoloV5, NumPy, Pandas, Scikit-learn
Web Dev & DB	Flask, Django, NodeJS, ExpressJS, ReactJS, Flutter, Heroku, GitHub, GitLab, Jekyll, MongoDB, Oracle SQL
Deployment	Docker, Kubernetes, Kafka, Sockets/WebSockets, Git, AWS, Raspberry Pi, Nvidia Jetson Nano, Intel SDM

Courses & Certifications

TensorFlow Developer Specialization (4 courses)	DeepLearning.AI (Andrew Ng)	99.06 %	Sept 2020	- Certificate
Deep learning Specialization (5 courses)	DeepLearning.AI (Andrew Ng)	96.02 %	Aug 2020	- Certificate
Interfacing with the Arduino	University of California, Irvine	100 %	Aug 2020	- Certificate
The Arduino Platform and C Programming	University of California, Irvine	98.75 %	Aug 2020	- Certificate
Intro to the Internet of Things and Embedded Systems	University of California, Irvine	100 %	July 2020	- Certificate

Achievements

2018-2020	Annual Merit Scholarship from Mahindra Ecole Centrale for 3 years — USD 4000 (awarded to top 10 positions in CSE).
2020	Awarded USD 1500 upon selection to CyberVSR program pre-COVID-19.
2017	Awarded USD 1100 Scholarship by State Of Maharashtra for coming in top 10% in state exams, towards pursuing a BS.
2015	Nominated School Captain and won the title Senior All Rounder for the year 2014-2015.

Volunteer & Community Service Experience

App Developer, Lake Homes Society (Powai, Mumbai) ⍉   **Oct 2021 — Present**
- Working with a team on developing a flutter mobile application for my residential building community, home to about 350 families, to be able to publish notifications, articles, and event updates.

Head Of Logistics, Mahindra Ecole Centrale   **Aug 2019 — Dec 2019**
- Organized several fundraisers, events and games and collected USD 2040 for our College Techno-Cultural Fest **Aether**.

Student Cultural Exchange Program and Youth Summit Participant, St Peter's School, Panchgani   **Nov 2014**
- Visited Netherlands, Finland and Italy for a cultural student exchange program and later on hosted our foreign guests during the Youth Summit and took part in events such as teaching underprivileged children, waste recycling drives and tree plantation.

Extra Curricular

- Was a member of the college football (soccer) team at Mahindra Ecole Centrale and participated in several inter college sports tournaments.   **Jun 2018 – Jun 2019**
- Performed at several events such as flash mobs, talent nights and fundraisers at Mahindra Ecole Centrale as a member of the Dance club - 8counts.   **Jun 2018 – May 2021**
- Mentored and guided several teams for various events such as hackathons and competitions as a member of the Computer Science Club - Enigma.   **Jun 2018 – May 2021**