

Satvarsh Gondala

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Education

Oregon State University

Ongoing

Master of Science in Computer Science

September 2022 - Present

- Selected Coursework: Artificial Intelligence, Machine Learning, Deep Learning, Algorithms, Parallel Programming

Vellore Institution of Technology

Bachelor of Technology in Computer Science and Engineering

July 2018 - August 2022

- Selected Coursework: Artificial Intelligence, Computer Architecture Design, Operating Systems, NASS-COM, Database Management System, Parallel and Distributed Computing.

Work Experience

Innodatatics - USA

May 2020 - July 2020

Machine Learning Internship (AI/ML)

[Link to more project details \(including certificate/merits\)](#)

- Worked as a **Machine Learning Intern** and successfully completed four independent projects
- Worked on real-time data management to generate a database in **Influx DB** + **Grafana** along with a neural network to generate monthly revenue forecasts for **Coca-Cola**
- Made a **survey research report on biometrics** with the data gathered from seven companies
- Prototyped a speech-to-text (STT) application using **Conv1D** + custom made architecture in Keras
- Achieved a **Word Error Rate** < 8 for the STT model, and provided a solution for **bilingual usecase** using transformers

Academic Projects

Time Reader - Analog to Digital Converter

March 2021 - June 2021

[Link to github repo \(Includes report and video demo\)](#)

- Built a tool (in Matlab) to analyze and read time from pictures of analog clock faces
- Trained with over 20k images and achieved an accuracy of ~ 80% on real images and 100% on simulated images
- Accounted for changes in lighting, shape, and color conditions by using various image processing algorithms

Realtime air quality monitoring toolkit using EMU8086

Jan 2021 - April 2021

[Link to github repo \(Includes report and code\(s\)\)](#)

- Used Arduino, Raspberry Pi, and a **Mosquitto MQTT Broker / Publisher Subscriber model** to build an application which sends data from MQ135 gas sensor to any Internet enabled platform seamlessly
- Features an **all digital temperature sensor** integration along with data to account for 5 hazardous gases + humidity
- One of the very few projects to use **EMU8086 as an IOT application**

VIT LABO - Virtual Laboratory for my university

Jan 2020 - April 2020

[Link to github repo \(Includes report, working code and video demo\)](#)

- Built a fully functioning and modular android app with features like **Anti-Cheat System** for teachers and students
- **Fully integrated** it with University's portal
- Included the ability to **post tests, extract logs**, and made demos for **two Virtual Lab activities**

Energy Calculation for Molecular Dynamics Simulations

August 2020 - October 2020

[Link to github repo \(Includes report, code and two video demos\)](#)

- Used **Open-MP** to showcase the power and benefits of Parallel Processing
- Made a Literature Review along with a Performance Pro-filer analysis report
- Created four versions of code to account and showcase the various range of parallel functions
- Achieved a **reduction in wall time by > 50%** in all the test cases compared to single threaded code

Other Projects

Survey Research on impact of changes in IT project requirements

September 2020 - October 2020

[Link to document](#)

- Surveyed the impact of incomplete specification or changing project requirements on IT projects
- Referenced and analyzed **20 shortlisted research papers**

Key loggers and Anti-Loggers

August 2020 - November 2020

[Link to document](#)

- Made a key logger and anti key logger that works remotely using AWS/Google Drive
- Features a **real-time encryption algorithm** that uses Hill Cipher encryption
- Wrote a literature survey spanning 12 research papers in the areas of penetration testing as base for my ideation

Bitcoin Bank

August 2020 - October 2020

[Link to screenshots](#)

- Prototyped an online bank to store and trade bitcoin
- Prioritized security by regularly checking for **inconsistencies in session validity** and changes in connection
- Added ability to display **live news updates and prices** of Bitcoin, Ethereum
- Used PHP+MySQL on back-end and HTML+CSS on front-end

Proprietary Disk Scheduling Algorithm

August 2019 - November 2019

- Prototyped a new disk scheduling algorithm designed to overcome the existing limitations of starving
- This has a boost in performance compared to standard SSTF, RR methods (15 - 25% increase)

Achievements

- Secured the highest scores for **Object Orienting Programming** in first two semesters **2018-2019**
- Secured **fourth position** at a big hackathon "Hello World 2.0" for creating a Gaming Focused social media platform **Game Byte** that uses deep-learning ([Presentation+Documents](#)) **2019**
- Secured **fourth position** at an Entrepreneurship Cell "Make-a-Thon" for proposing an item trading platform powered completely by digital in-house currency while using proprietary algorithm to calculate value of item **2019**
- Made a game ([Robo Dash](#)) when I was 15. Got a rating of **4.6/5** and was featured in local news paper "Eenadu" ([Article Link](#), [App Link](#)) **2016**

Technical Skills

- **Languages:** C++ (Expert) | Python (Expert) | Java (Intermediate) | C# (Intermediate) | R (Intermediate) | Matlab (Intermediate) | GIT (Intermediate)
- **Others:** PHP (Expert) | Live SQL (Expert) | HTML (Expert) | CSS (Expert) | PyTorch (Intermediate) | TensorFlow (Intermediate) | Influx DB (Intermediate) | Android Studio (Intermediate) | Django (Beginner) | MongoDB (Beginner)

Extra-Curricular Activities

- Worked as a House Representative in my high school
- Worked as a captain for my football team in high school and secured second position in annual school championship
- Took part in several hackathons and won few college fest events
- Interested in writing short stories - [Few unpublished works](#)