Vinayak Verma

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PROFILE

Greetings! I believe Electricals, Electronics, teamwork and a lot of fun is required to deliver a sustainable future. My experience with developing monitoring systems, data analysis and smart devices will play a critical role to deliver optimised solutions to business challenges.

PROFESSIONAL EXPERIENCE

Asbuilt Digital
Data Science Intern
12/2022 – 02/2023
Auckland, New Zealand
During my 3-month internship at Asbuilt Digital, I honed my skills in machine learning, data analysis, and object-oriented programming (OOP) with Python. This experience equipped me with a strong foundation in leveraging data-driven insights, implementing ML algorithms, and applying OOP principles for efficient code development. I am now eager to apply my acquired experience and contribute to other challenging roles.

SKILLS

Teamwork
Giving/receiving feedback, empathy and technical communication are abilities I praise. Been working across 5 teams during my academia and have realised the value of constructive feedback. Its job is to uproot budding problems and streamline team productivity. Secondly, empathy is another critical aspect I deeply respect. Being enrolled into a prominent NZ engineering programme I am exposed to cultural diversity. This has allowed me to develop an ability to understand my colleagues' personal beliefs and act appropriately. Finally, communicating technical knowledge to a lay audience is what I practise daily. In academia, I often work with students across different disciplines which allows me to deliver my ideas effectively.

Critical Thinking
With a strong aptitude for critical thinking through mind mapping and significant time management skills, I adeptly organize complex problems, enabling efficient problem-solving. An example of this can be seen in my data science internship with Asbuilt where before implementing any ML models I made sure to read the research paper on them to make sure I have a good understanding of my implementations. This proved to be beneficial as I was able to confidently present myself during code reviews.

PROJECTS

Smart Energy Monitor
ELECTENG 209 - Academic Project
07/2023 – 11/2023
I developed **Analogue/Digital** hardware with my team to monitor and control **energy usage**. To develop the monitoring system we developed circuits on paper and tested them on LTSpice. I used an ATmega328p IC to address the **control system**. We used Proteus and Microchip Studio to develop firmware and **simulate** our design. After **verification** & **validation**, I used Altium to develop a beautiful PCB of our design. Rather than through-hole parts, we decided to go forward with **SMT parts** (industry standard) to push ourselves to become better engineers. Finally, I developed a **communication** channel between the hardware and the computer to **turn on/off loads smartly**.

During my internship at AsBuilt Digital, I had the privilege of being part of a dynamic team that greatly contributed to my personal and professional growth. We worked in a team of 6 people where 2 of them were Australian based. My supervisor encouraged me to explore and research topics related to our work, pushing me out of my comfort zone and fostering confidence in my abilities. The positive work culture at AsBuilt made me feel valued and supported by the entire team. Their unwavering support created an environment where I thrived both personally and professionally. I am grateful for the invaluable experiences and lessons gained during my time at AsBuilt Digital. Please find the reference of teammate Carlo in the Reference Section.

EDUCATION

Bachelor of Engineering (Honors) - Electrical and Electronic Engineering
University of Auckland
02/2022 – present
Auckland, New Zealand

Certificate in Neural Networks and Deep Learning
Coursera
Credential URL:
https://www.coursera.org/account/accomplishments/certificate/SX266XKA8T25

REFERENCES

Carlo Carbonilla (Click for LinkedIn),
Junior Data Scientist, Asbuilt
https://www.linkedin.com/in/carlo-carbonilla-02050b190/

AI IoT Anomaly Detection
Data Science Intern - Asbuilt Digital
11/2021 – 03/2022
For our team, I used **machine learning** & **computer vision** techniques to understand the causal of IoT **anomaly detection.** Doing so allowed us to create actionable **insights** from IoT sensors and camera feeds to improve the built environment safe for the community including workers, patients, neighbours and pedestrians.

Major Accomplishment:
A major problem I solved for the team was lower **accuracy** due to the usage of default parameters when training models. My major **contribution** was integrating a hyperparameter tuning feature into the current model pipeline. Doing so increased the z-scores of our models by an average of between **5% to 10%**. Due to its success, the senior developer put the feature into the **production** pipeline.

INTERESTS

- Meditation Classes