Abhinandan Thour

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STACK:

Python, JavaScript, React, NodeJS, HTML, CSS

WORK EXPERIENCE:

Full Stack Developer – Part Time Internship
Devatop – Centre for Africa Development — Nigeria, remote (09/2023 – 12/2023)

- Collaborated with a UNICEF-sponsored organization in an Agile work environment, focusing on Research and Development of tools and websites designed to empower individuals facing challenging circumstances, such as Human Trafficking, Rape, Domestic Violence, and Child Abuse.
- Leveraged React, Git, and JavaScript/jQuery to revamp existing websites and employed Python to organize and visualize user-generated input data, as well as performing code reviews and ensuring the code is well documented and follows company coding standards, facilitating research enhancements and aiding in the pursuit of government funding requests.

NPI Manufacturing Engineer – Year Long Placement
Cummins Inc. — Daventry, UK (08/2022 – 08/2023)

- Worked within the New Product Introduction team in the High-Performance Powertrains branch to introduce and support projects across two production lines, covering engine sizes of 38L, 45L, 50L, 60L, and 78L at various stages of development with hands on experience in fitting engine parts with operators on the assembly.
- Led presentations on manufacturing aspects in component design reviews and engine integration meetings for global teams. Addressed progress, design, manufacturing, and electronics issues, collaboratively working to find solutions within tight deadlines. This experience provided me with the opportunity to gain insights into the entire manufacturing cycle, from conceptual design to the production of the final item.
- Proposed an innovative approach to prototype assessment by introducing cutting-edge technologies such as Virtual Reality and 3D printing. This strategic initiative led to significant cost savings per manufactured part, attributed to streamlined logistics and a more efficient prototype manufacturing process. My proactive mindset, guided by the principle of "Challenge without being challenged," played a pivotal role in successfully implementing this transformative change and resolve issues.
- Additional responsibilities involve exploring novel equipment and processes, as well as refining current manufacturing production methods to enhance quality, increase capacity, or lower costs.
- Produced Process Documentation that documented assembly instructions for both new and existing products, conforming to Cummins Engineering Standards (CES) and plant quality processes.

Mechanical Design Engineer – Summer internship
New Motion Lab Ltd. — London, UK (08/2020)

- Utilised research and development expertise to design a novel transmission chain that employs a new method of power transmission via both sides of the sprocket tooth. Developed solutions to decrease chain wear and enhance engagement with the pinion, while maintaining high efficiency.
- Conducted transmission chain testing and analysed data from physical tests and simulations of various mechanism prototypes, including wear tests, heat simulations, and force distribution simulations (FEA).
- Managed individual project objectives while participating in team meetings and collaborating with colleagues on group assignments.

EDUCATION:

- **MEng Mechanical Engineering / Aerospace Engineering Meng** (2:1)
  University of Southampton — Southampton, UK (09/2020 – 08/2024)
- **Full Stack Developer Bootcamp** (100%)
  edX (UK Government Sponsored) — London, UK (09/2022 – 06/2023)
- **BEng Mechanical Engineering** (1st)
  University of Hertfordshire — Hatfield, UK (09/2019 – 08/2022)

PERSONAL SKILLS:

Languages: English, Italian, Spanish, Hindi, Punjabi

Technical skills:

- **Coding** – Experienced in Objected Oriented languages such as JavaScript, Python, and C++, with proficiency in software version control systems. Applied Python academically to optimise aircraft aerofoils design and aerodynamics and designed code to assess material performance of composites materials such as Carbon Fibre. Utilised C++ for Arduino projects, including a remote-controlled DIY robot. Employed JavaScript (alongside React) for full stack projects in Agile teams, notably developing various project involving AI to help non-English speaking student through their university career and when searching for a job.
- **Microsoft 365 Package –** Skilled in the office suite, ranging from Excel, PowerPoint to SharePoint and Power BI. Used for presentations, customer relationships, data management, team and project management using SharePoint and visualize team and project performance using Power BI. Complimented by previous employer for the level of knowledge which led to me create documentation and training material for the department.

Soft Skill

- **Interpersonal** – Having lived in four different countries, each with its own unique culture, my adaptability and effective communication skills have been fundamental in building connections with people. These same competencies have proven valuable in team environments, be it at a fast-food establishment, during volunteer work, or in my engineering experiences. By fostering strong connections with colleagues, I have been able to enhance teamwork and work more efficiently. These skills have empowered me to confidently tackle challenges, understand and articulate clients' needs, and, notably, excel in presenting and communicating the work of my department or plant to both internal and external stakeholders.
- **Time management** – I demonstrated my effective time management skills during my engineering placement year, where I took on the responsibility of overseeing six distinct engine projects in collaboration with multiple teams. My skilled handling of time allowed me to efficiently organize both my personal schedule and the overall project timeline. As a result, the team gained crucial additional time to ensure the quality of the products before shipment. This proficiency was further highlighted outside my placement when I successfully engaged in a challenging Coding Bootcamp, requiring an additional 40 hours of work per week on top of my full-time job responsibilities. This showcases my dedicated and career-focused nature.
- **Analytical and Critical Thinking –** In my prior role as a NPI engineer, I managed projects with a value of up to $5 million each. Utilizing my initiative to make informed decisions based on data from diverse departments was crucial to mitigate complications during the engine manufacturing process. This entailed systematically breaking down the problem in manageable blocks, deriving solutions through mathematical and analytical methods that considered challenges from various departments such as Finance, Manufacturing, Design, and Logistics. I then analysed and discussed these findings with senior engineers, thus collaborating with cross-functional teams to gather and analyse requirements, before finalizing the final solutions.

EXTRACURRICULAR ACTIVITIES

Covid-19 Volunteer Slough, UK (From 06/2021)

- Led the team to a successful shift by assigning tasks and goals at the beginning of the day with the goal of creating a positive impact on the community.
- Allowed nurses and doctors to work smoothly by organising people in sub-groups depending on their vaccination and their situation, such as pregnancy and disability.
- Interacted with people to make sure their experience is as pleasant as possible as many people are concerned about the vaccination program and why it is suggested by the NHS.

Erasmus + (European Commission Sponsored) Craiova, Romania (04/2018)

- Workshops on perspective to live on Mars and an introduction to environment changes and space travelling.
- Discussion and creating new connections between people from different countries during workshops.
- Learnt how to interact with people while working in an unfamiliar circumstance abroad.

INTERESTS AND HOBBIES:

- **Entrepreneurship** - Engaging in laptop repair and resale: I initiated this venture by working with dysfunctional laptops, aiming to restore and further sell them for a profit. This has proven interesting and demanding, as it requires comprehending their internal electronics before repairing them. This initiative comes from my strong interest in creating businesses that have an impact on everyday recycling.
- **Full Stack Developer Freelancer** – While completing my university degree, I became involved in simplifying everyday problems that students across my university faced. One of the projects I developed, as shown on my GitHub (github.com/Bh00fie), is a cover letter generator that uses the OpenAI API. This project was created to assist the many international students at my university who struggle to write cover letters due to language barriers. Additionally, similar services were often behind paywalls. My website allows users to generate 80% of a tailored cover letter within minutes for free. The next step is to make the website more accessible for people with disabilities.