PARTH NATU

Austin, TX

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EXPERIENCE

Dematic Corp., *Austin, TX*

Software Engineer Level 2   Feb 2022– Present

- Developed, tested and deployed a full-stack application to control warehouse hardware and order fulfillment using Java, MySQL, and Linux
- Lead and delivered warehouse control software for 10+ clients in the span of less than 2 years
- Increased project delivery efficiency by converting a legacy Java application to a set of Docker containers
- Enhanced in-house wiki by auto-generating labels for pages using Python and Machine Learning

CableLabs, *State College, PA*

5G Security Intern   May 2021 – Aug 2021

- Created a new network function in the 5G Core Network for digitally signing broadcast messages using Docker.
- Reduced security risks on all 5G devices by adding a layer of authentication to broadcast messages while adding minimal overhead in terms of memory and latency
- Added replay attack mitigation to the 5G protocol which achieved 97.7% accuracy
- Used C, C++ and gdb with a large open-source repository to implement the solution

Covance, *Mumbai, India*

Software Development Intern   June 2018 – June 2019

- Improved efficiency of medical case retrieval by 22% through deploying an RPA based data retrieval tool into production capable of retrieving data over 1,000 medical cases from an online portal using Selenium and Java
- Used JDBC to interact with the production database and store retrieved data
- Analyzed and collected data to create an innovative text classifier using scikit-learn and python3, for patient complaints which achieved 77% accuracy.
- Created a web app to take text as input and classify it to a MedDRA-coded disease. The web app communicated with a machine learning model over HTTP

PROJECTS

PennConnect – Graph Database Social Network Application

Team Lead   Aug 2019 – Dec 2019

- Led a team of 4 in the design and development of a successful social network from scratch, including the front-end, back-end, DBMS, and deployment.
- Utilized neo4j as a graph database for storing relationships between users and analyzed data on how to better enhance each feature.
- Created a user-friendly design that customizes each user's news feed, ability to create posts, add/remove friends, and functionality for session management.

Autonomous Underwater Vehicle (AUV)

Software Lead   May 2016 – May 2018

- Implemented the software architecture of an AUV using Robot Operating System (ROS) to research and collect robot capabilities under water.
- Coded the PID control system for handling the vehicle's complicated movements underwater, having control of all 6 degrees of freedom over a wired interface.
- Competed in both international and national competitions against other collegiate teams

EDUCATION

Pennsylvania State University, *State College, PA*   Aug 2019 – Dec 2021

Master of Science in Computer Science and Engineering – GPA: 3.65

SRM University, *Chennai, India*   Aug 2014 – May 2018

Bachelor of Technology in Electronics and Communication Engineering – GPA: 3.77

SKILLS

- **Technical Experience**: Java, C, C++, Linux, JavaScript, PHP, Arduino, Google Assistant API, Amazon Alexa API, Maven, Eclipse IDE, MySQL, Python, HTML5, CSS3, AWS, Raspberry Pi, Digital Ocean, Selenium, Flask, scikit-learn, Bootstrap, Docker