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Rohan Rajesh Tipnis

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TECHNICAL EXPERIENCE

Graduate Research Assistant - Heracleia Lab

April 2022 — August 2022

Computer Science Dept, The University of Texas at Arlington

- Wrote programs to interface and collect data from various bio-medical sensors such as MUSE(EEG) and ECG using Python.
- Developed client server services for working with various robotic components using Python, C++ and Robot Operating System.
- Maintained and updated the Heracleia Lab website.

PETRA 22' International Conference Organizer

April 2022 — August 2022

Computer Science Dept, The University of Texas at Arlington

- Organized and coordinated an International Conference called Pervasive Technologies Related to Assistive Environments (PETRA).
- Maintained PETRA conference website.

Project Associate (Software Engineer)

August 2019 — May 2021

Maharashtra Knowledge Corporation Ltd.

- Developed functional user interfaces for web applications using HTML, CSS, Vue and Angular.js which had a user base of 25k users on daily basis.
- Wrote server side code and designed APIs following a micro-service architecture to facilitate functionalities like login, user authentication, workflow management etc.
- Created and maintained relational and non-relational database functionalities.
- Deployed application builds on staging server for testing and making nginx configurations.
- Coordinated in an agile environment to adapt to requirement changes and deliver quality software abiding deadlines.
- Redesigned the AJAX based bidding system, scaling the count of maximum real-time supported users from 300 to 1 million using Go and Gorilla-websockets

SKILLS

Languages

Python, Golang, JavaScript, Node.js, Vuejs, ROS, C++

Tools

Git, Nginx, Postman, Jmeter, Visual Studio Code, MySQL, MongoDB

PROJECTS

Chip-8 Emulator (C++)

- Low-level emulator written in C++ to load the binary opcodes of Chip-8 ROMs, disassemble and decode them into hexadecimal values for execution..
- Implemented the concept of memory, stack, program counters, stack pointers and registers.
- Used the SDL2 library to render the output and poll for inputs.

Pong Game (C++)

- Recreated the classic game 'Pong' in C++.
- Used the raylib library to render shapes in the game and capture user input and process game logic.
- Two players can play in a PvP format one using the W, S key and second using the Up and Down arrow keys.

Todo Web Application (Vue.js, Python Flask, MySQL)

- Created a web application with the functionality of a To-Do List.
- Developed the backend using Python Flask and designed the front-end using Vuejs.
- Stored the data in a MySQL database to make the information persistent.

EDUCATION

Master of Science in Computer Science

August 2021 — August 2023

University Of Texas at Arlington

Relevant Courses: Data Structures, Algorithms, Distributed Systems, Software Project Management, Database Systems, Game Design, Advance Software Engineering.

Bachelors Of Electronics And Telecommunications Engineering

June 2019

University Of Mumbai

Relevant Courses: Neural Networks, Object Oriented Programming, Micro-controllers, Microprocessors, Structured Programming Approach.