# Rohan Rajesh Tipnis

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## TECHNICAL EXPERIENCE

**Graduate Teaching Assistant (DASC-5324 Intro To Prob & Stats)**                    **Feb 2023 — May 2023**
*Computer Science Dept, The University of Texas at Arlington*

- Assisted professors in conducting classes and exams.
- Graded assignments and exams, providing timely and constructive feedback to students.
- Facilitated discussions, answered student questions, and provided guidance on assignments and projects.

**Graduate Research Assistant & Conference Organizer**                    **April 2022 — August 2022**
*Heracleia Lab, Computer Science Dept, The University of Texas at Arlington*

- Developed programs to interface and collect data from various bio-medical sensors such as MUSE (EEG) and ECG using Python..
- Created client-server services for working with various robotic components using Python, C++, and Robot Operating System (ROS)
- Organized and coordinated an International Conference called PErvasive Technologies Related to Assistive Environments (PETRA).
- Managed the PETRA conference and Heracleia websites.

**Project Associate (Software Engineer)**                    **August 2019 — May 2021**
*Maharashtra Knowledge Corporation Ltd.*

- Developed user interfaces for web applications using HTML, CSS, Vue, and Angular.js with a user base of 25k daily users.
- Implemented server-side code and designed APIs following a micro-service architecture.
- Created and maintained relational and non-relational databases.
- Deployed application builds on staging servers and performed nginx configurations.
- Adapted to requirement changes in an agile environment and delivered quality software within deadlines.
- Redesigned the AJAX-based bidding system, scaling real-time supported users from 300 to 1 million using Go and Gorilla-websockets.

## SKILLS

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| **Languages** | Python, Golang, JavaScript, Node.js, Vuejs, ROS, C++ |
| **Tools** | Git, Nginx, Postman, Jmeter, Visual Studio Code, MySQL, MongoDb |

## PROJECTS

**Chip-8 Emulator (C++)**
- Developed a low-level emulator in C++ to load and execute binary opcodes of Chip-8 ROMs.
- Implemented memory management, stack, program counters, stack pointers, and registers.
- Used the SDL2 library for rendering and capturing user inputs.

**Pong Game (C++)**
- Recreated the classic game 'Pong' in C++.
- Utilized the raylib library for rendering shapes and handling user input.
- Supported two-player PvP format using keyboard inputs.

**Todo Web Application (Vue.js, Python Flask, MySQL)**
- Developed a web application with a To-Do List functionality.
- Designed the backend using Python Flask and the frontend using Vue.js.
- Implemented persistent storage using a MySQL database.

## EDUCATION

**Master of Science in Computer Science**                    **August 2021 — December 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.