Talhah Peerbhai

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EDUCATION

Carnegie Mellon University

Aug 2021 - May 2025

Bachelor of Science in Computer Science, Minor in Tech Entrepreneurship

Course Work: Deep Learning | Imperative Computing, AI for Medicine | Functional Programming | Parallel Algorithms and Data Structures | Great Theoretical Ideas in CS | Intro to Computer Systems | Distributed Systems | Computational Biology | Constructive Logic | Marketing | Digital Marketing | Organizational Behaviour | Tech Entrepreneurship

Awards: Deans List (Fall24), National Programming Contest 3rd, National Programming Contest 4th, Lifelines Hackathon 4th

EXPERIENCE

Software Developer

Sep 2024 - Present

Carnegie Mellon University

Doha, QA

- Built a REST API using Golang for a mobile app empowering students and staff to recycle
- Collaborated closely with frontend engineers and staff to refine functionality, improved testing coverage by 20%
- · Managed system deployment and administration, including setup, scaling and maintenance

Web Developer May 2024 - Dec 2024

Carnegie Mellon University

Doha, QA

- Engineered a full-stack web application using Svelte, designed to scale for 300+ users and is currently on-boarding
- Created and streamlined a REST API using FastAPI for scheduling software for students and faculty
- Collaborated with faculty and students to gather requirements and tailor UI/UX

Founder at ReelAxe Jul 2024 - Aug 2024

University of Porto

Porto, PT

- Led overall strategy, operations and visions of the startup
- Validated product concept through interviews and surveys with 270 potential customers, refining the business model.
- Oversaw product development from concept to launch, bridging the business and technical requirements

PROJECTS

AI Phoneme Classifier | Neural networks, Deep learning, Kaggle

Jan 2025 - Feb 2025

- Created a deep neural network using MLP to classify phoneme utterances on WSJ dataset
- Tested various hyper parameters and leveraged wandb to keep track of runs
- Achieved a classification of 86.9% accuracy and secured 33/306 on kaggle leaderboard

FileStack | Java, Unix, Networking

Sep 2024 - Oct 2024

- Built a Distributed File System, scalable and fault-tolerant
- Implemented a naming server for centralized coordination, maintaining metadata and name space operations
- Designed concurrency control mechanisms enabling safe simultaneous access and ensuring data consistency

Memory Allocator $\mid C$

Nov2023 - Nov2022

- Developed a memory allocator using Least Recently Used (LRU) eviction policy and doubly linked free lists
- $\bullet \ \ \text{Improved memory utilization from } 40\% \ \text{to } 80\%, \ \text{optimizing how memory blocks are allocated and de-allocated} \\$
- Achieved high throughput by refining allocation, minimizing fragmentation, and ensuring fast memory access

LEADERSHIP AND CAMPUS ACTIVITIES

President | OpenCMUQ Club

Aug 2024 - Present

• Lead a student driven organization aimed at fostering a collaborative open-source culture at CMUQ. I oversaw the maintenance of community-focused software projects, ensuring sustainability and growth through active student engagement and mentorship

Outreach Assistant | Google Developer Student Club CMUQ

Oct 2024 - Present

- Managed communication to various organizations and coordinated events and guest speakers
- Designed and facilitated interactive workshops to introduce hands-on skills and develop a strong software foundation

TECHNICAL SKILLS

 $\textbf{Languages: Java, Python, C/C++, Golang, JavaScript, HTML/CSS, Dart, Prolog, Haskell (Colored Colored Color$

Frameworks: Svelte, FastAPI, Tkinter, QT, PyTorch, Numpy

Developer Tools: Git, Docker, Node.js, Google Cloud Platform, VS Code, Unix, Nginx, Postman, Vim