

## EDUCATION

**Lahore University of Management Sciences (LUMS)** – BS Computer Science 2020 – 2024  
Relevant Courses: *Algorithms, Databases, Software Engineering, Distributed Systems, Blockchain, Operating Systems, Computer Architecture, Machine Learning, Artificial intelligence, Data Science.*

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## EXPERIENCE

- Sehat-Sanjha** - Software Engineer - Part Time July 2023 – Present
- Sehat Sanjha is a health-care startup using ML to provide a physician's assistant to improve the health care experience digitally by leveraging 100M+ mobile users in Pakistan.
  - Despite being the only student in a team of 3 developers, I have introduced numerous features such as event tracking, setting up proxy server, developing landing pages and further enhancements for physician facing webapp.
  - **Technologies:** TypeScript, React, Redux toolkit, MaterialUI, GraphQL, Apollo Server, Mixpanel, DynamoDb, AWS lambda, Serverless, React-testing-library, Jest.
- Bookme.pk** - Software Engineer - Internship June 2023 – Aug 2023
- Bookme.pk is Pakistan's largest online ticket selling platform that was able to secure \$7.5 million in Series-A funding round.
  - I contributed to airline vertical and made a *Data Mapper* which maps JSON data from different airlines' API into a unified format to be displayed on frontend.
  - **Technologies:** VueJS/NuxtJS, PHP, Laravel, JSON-server.
- Center for Speech and Language Tech. (CSaLT)** - Web Developer - Part Time Jan 2023 – May 2023
- CSaLT is a Speech Processing Lab, at LUMS, founded by Dr. Agha Ali, who has been Meta Research Award winner for 3 consecutive years.
  - Built a *Web App* for Speaker Identification ML model, which helps in identifying speakers from given audio recordings. I also designed and deployed a *REST API* that can be integrated into any system.
  - **Technologies:** Python, FastAPI, REACTJS, Tailwind, Hugging Face, GitHub-Pages.

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## PROJECTS

- **Hubhyve** | SvelteKit, Tailwind, Pocket Base, Zod, Vite   
Developed a web app for an EdTech startup aiming to connect professional experts with learners all over the world. Learners can gain valuable knowledge directly from experienced professionals.
- **Speaker Identification** | Python, FastAPI, ReactJS, Tailwind   
Developed a web interface for a speaker identification ML model, incorporating a *REST API*. This system efficiently predicts, with an accuracy of 85%, the speaker of a given test audio by leveraging a pool of reference recordings.
- **Distributed, Fault-Tolerant Key-Value Store** | Golang  
Built a distributed key-value store that achieves consensus and fault-tolerance through Raft (self-implemented).
- **Buddy Memory Allocator** | C Language  
Implemented a heap memory allocator system by programming my own version of malloc and free calls in C.

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## PROFESSIONAL SKILLS

- **Programming languages:** JavaScript, TypeScript, HTML, CSS, Python, Go, Haskell, SQL, PHP, C, C++, Solidity, Matlab.
- **Frameworks, tools & libraries:** ReactJS, Redux toolkit, Svelte/Svelte kit, VueJS/NuxtJS, Material UI, Tailwind, Express, NodeJS, FastAPI, Laravel, Git, GitHub.
- **API Technologies:** REST API, GraphQL.
- **Databases:** MySQL, MongoDB, Pocket Base.
- **Machine Learning tools:** Pandas, Scikit Learn, Numpy, Pytorch, TensorFlow and Matplotlib.
- **Cloud & Deployment Tools:** AWS EC2, Nginx, Hugging Face, Firebase, GitHub-Pages.

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## EXTRA-CURRICULAR

- LUMS Literary Society – LLS** Sep 2022 – March 2023
- Headed LLS flagship event *Bethak*. It was a monthly event in which people from all over the university were invited to showcase their literary skills.
  - Organized and supervised society's orientation for fall 2023, resulting in a record turnout of 115 students.

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## INTERESTS

- Networks, Computer systems, Chess, Combat Sports, Music (AC/DC all the way).