Ben Paul Varghese

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https://benpaul2002.github.io

Education

International Institute of Information Technology (IIIT-H), Hyderabad, India — September 2020 - Present

Bachelor of Technology in Computer Science and Engineering — *GPA: 8.11/10*

Experience

Frontend Intern — May 2023 - Present

Neobase — *Hyderabad, India*

- Developed and maintained reusable components for multiple web projects using Next.js, TypeScript and Tailwind CSS; followed best coding practices.

UI/UX Intern — November 2022 - May 2023

Inclusive Growth Chain (IGC) — *Hyderabad, India*

- Developed IGC's personal website completely from scratch using ReactJS. Also made the website responsive for mobile use.
- Worked on the frontend of IGC's project with IIT Dhanbad to create a website interface for farmers in rural India to sell their lac (a resin like farm produce) at a fair price without the involvement of middlemen. The website also allows for farmers to apply for loans, get the latest crop advisories, and for corporate clients to bid on the farmers' lac produce.

Software Development Intern — January 2022 - April 2022

Designocare — *Hyderabad, India*

- Created an android app for users to monitor their temperature readings using an external device.
- The app was created by a team of 4 members for an external company as part of the Design and Analysis of Software Systems course in IIIT-H.
- Development was done using React Native, ExpressJS, MongoDB, and NodeJS, and following AGILE methodology.

Independent Study on Reinforcement Learning — January 2023 - May 2023

Prof. Praveen Paruchuri — *Machine Learning Lab, IIIT-H*

- Learned about multi agent systems, particularly about the reinforcement learning implementation of hide and seek by OpenAI. Also developed Snake and Cartpole games using Q learning, Deep Q Learning, and REINFORCE algorithms.

Projects

1st place at the BUIDL FOR WEB3 Hackathon

- Created a website that enables property owners to list their properties as NFTs and use a token sale to bring on co-owners. Additionally, the website offers the capability to rent out properties and allocate the rent income among the owners based on their share of tokens.

Shell **Link**

- Created a Linux shell from scratch using C
- Added functionality for most commonly used commands (cd, ls, etc.), along with support for foreground and background processes and signals

xv6 OS **Link**

- Tweaked the xv6 operating system by adding system calls - one to trace the systems calls made by a command, another to change the priority of a process
- Added two new schedulers - First Come First Served (FCFS) and Priority Based Scheduling (PBS)

Bitcoin Simulator **Link**

- Designed a bitcoin simulator using C (group project)
- Simulator supports multiple users, with transactions being stored as a blockchain, complete with hashing for security and verification

Parliament Database **Link**

- Implemented a miniature database based on the Indian Parliament System using MySQL and Python (group project)
- Added functionality for common DBMS operations, while also handling relations between the tables so as to properly simulate a parliamentary system

Nautica **Link**

- Created a 3D game using WebGL and ThreeJS involving a ship travelling the ocean, collecting treasures, and destroying enemy ships

Technical Skills

Programming Languages: C, C++, Java, Python, HTML, CSS, JavaScript, SQL, Bash, C# (Unity)

APIs/Libraries/Other Software: NextJS, Tailwind CSS, Unity, OpenGL, WebGL, ReactJS, Express.js, Node.js, MongoDB, React Native

Other Courses: Data Science & Machine Learning Track in 30 Days of Google Cloud Program