

SUMMARY

I am an aspiring computer scientist and software developer with proficiency in modern software design principles and methodologies backed with a strong background in theoretical computer science, mathematics, and logic. I apply my skills to build simple, efficient and reliable software, with a focus on full-stack web development.

EDUCATION

<b>2020 - Present   VIT Chennai</b> B.Tech in Computer Science and Engineering	<b>2020 - Present   IIT Madras</b> B.S in Programming and Data Science
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AREAS OF EXPERTISE

<div>✓ Javascript, <b>Typescript</b>, <b>Node.JS</b></div> <div><b>React</b>, HTML5/CSS3, <b>Tailwind</b>, <b>Next.js</b></div> <div><b>Python</b>, <b>Java</b>, C, C++, Rust, F#</div> <div>✓ <b>Data structures and algorithms</b></div> <div>✓ Code structure &amp; architecture</div> <div>✓ <b>Scripting</b>, Source Control and Developer tools</div>	<div>✓ <b>Database Design</b>, Hardware, Operating Systems, <b>Low level programming</b></div> <div>✓ JavaScript and Node.js internals</div> <div>✓ <b>Cryptography</b>, Mathematics, and Logic</div> <div>✓ Language and <b>compiler</b> design</div> <div>✓ <b>Web security</b>, Low level security</div>
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EXPERIENCE

<b>Intern, RISE Lab, IIT Madras : May 2022 - Present</b> <ul style="list-style-type: none"><li>Working on the <b>SHAKTI</b> microprocessor</li><li>Worked with quantum and classical logic synthesis libraries on a relevant cryptography problem</li></ul> <b>Project Head, IEEE Computer Society, VIT Chennai Chapter : October 2022 - Present</b> <ul style="list-style-type: none"><li>Built <b>web servers</b> and designed <b>APIs</b> as required for various projects and events carried out by the club</li><li>Built frontend applications by carefully following provided UI designs, backed by a strong TypeScript architecture using modern frameworks and libraries.</li></ul> <b>Overall Technical Head, HackClub, VIT Chennai branch : October 2022 - Present</b> <ul style="list-style-type: none"><li>Built multiple websites in vanilla <b>HTML5/CSS3/ES6 JS</b> for events conducted by the club</li></ul>
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PROJECTS

<ul style="list-style-type: none"><li>Authored an <b>Express middleware</b>. <a href="https://npmjs.com/yup-express-middleware">https://npmjs.com/yup-express-middleware</a>.</li><li>Built a full-stack computer from scratch - <b>CPU architecture, assembler, compiler, virtual machine</b> (for an OOP language) <b>and an interpreter</b> as part of the Nand2Tetris Projects.</li><li>Wrote a full fledged discord music bot, with customized services, <b>audio manipulation</b>, and more. <a href="https://npmjs.com/jambot">https://npmjs.com/jambot</a></li><li>Wrote a <b>machine learning</b> application that recommends the user music based on their mood, which is detected from their face. <a href="https://github.com/porridgewithraisins/mood-music-recommendation">https://github.com/porridgewithraisins/mood-music-recommendation</a></li><li>Wrote a script to notify users of open vaccination slots during the <b>COVID-19 vaccination drive</b> - <a href="https://gist.github.com/porridgewithraisins/1af7fca4e00cad94cb414e24e0bd9321">https://gist.github.com/porridgewithraisins/1af7fca4e00cad94cb414e24e0bd9321</a></li><li>Helped write a fully fledged <b>tiling window manager</b> for Windows in AutoHotkey</li><li>Wrote an OO wrapper around the heapq python module, implementing the <b>Heap data structure</b> - <a href="https://gist.github.com/porridgewithraisins/1ecf510de5ed9ebed367925d4a2334d7">https://gist.github.com/porridgewithraisins/1ecf510de5ed9ebed367925d4a2334d7</a></li><li>Wrote an <b>asynchronous task queue</b> in <b>typescript</b> - runs on both browser and Node.js - <a href="https://gist.github.com/porridgewithraisins/02b2c5d394b8adc79776893e8656d35a">https://gist.github.com/porridgewithraisins/02b2c5d394b8adc79776893e8656d35a</a></li><li>Wrote a module to aid Node.js applications in performing <b>OAuth</b> with the <b>Spotify web API</b> - <a href="https://gist.github.com/porridgewithraisins/a71277334164daf6f75e6fae99e4259c">https://gist.github.com/porridgewithraisins/a71277334164daf6f75e6fae99e4259c</a></li><li>Wrote a <b>Node.js module</b> for applications to easily and flexibly retrieve chess opening information <a href="https://npmjs.com/chess-opening-info">https://npmjs.com/chess-opening-info</a></li></ul>
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ACHIEVEMENTS

<b>Hackathon: Hack-O-Pitch, IIT Madras</b> <ul style="list-style-type: none"><li>Won <b>3rd Place</b> by building a <b>decentralized cloud platform</b> on top of IPFS, with a wide range of services like authentication, data storage, querying and analytics.</li></ul> <b>Hackathon: HC-Educates, Hackclub VIT Chennai</b> <ul style="list-style-type: none"><li>Won <b>2nd Place</b> by building an <b>Ed-tech</b> product to help students manage their workflows better.</li></ul>
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