

# Suraj B M

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## About

I am a proficient fullstack web developer with a strong background in cryptography, leveraging modern web development stacks such as T3Stack and MERNStack. My experience encompasses building responsive UIs and developing secure applications utilizing role-based authorizations. I am also moderately experienced with setting up production environments and CI/CD builds.

## Projects

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| Bun, Podman      | <b>homelab</b> <ul style="list-style-type: none"> <li>Built a homelab with a Raspberry Pi that has CI/CD setup for my projects, and has other open source apps hosted on it, mapped to three of my domains.</li> </ul>   |
| Next.js, MySQL   | <b>rapport</b> <ul style="list-style-type: none"> <li>Created an <b>end-to-end encrypted messaging app</b> securing messages using multiple encryption layers, including <b>ECDH</b>, <b>AES</b>, and <b>PBKDF2</b>.</li> <li>Github link: <a href="#">silicoflare/rapport</a></li> </ul>  |
| Next.js, MongoDB | <b>nexgen-portal</b> <ul style="list-style-type: none"> <li>Created an innovative portal for <b>participant check-in</b> that streamlined the management of <b>food coupons</b> and improved the logging process for snacks during NexGen 2.0, a high-energy 24-hour hackathon.</li> <li>Github link: <a href="#">silicoflare/nexgen-portal</a></li> </ul>                               |
| bash, Dockerfile | <b>docker-hadoop</b> <ul style="list-style-type: none"> <li>Developed a <b>minified Docker image</b> based on Ubuntu, preloaded with essential <b>Big Data tools</b> including Hadoop, Pig, and Spark.</li> <li>Github link: <a href="#">silicoflare/docker-hadoop</a></li> </ul>  |
| Next.js, FastAPI | <b>vroomify</b> <ul style="list-style-type: none"> <li>Designed an innovative <b>enterprise resource planning</b> website for a fictional automobile company, enhancing order tracking, inventory management, and material procurement processes.</li> <li>Github link: <a href="#">silicoflare/vroomify</a></li> </ul>  |
| Bun, TypeScript  | <b>confidant</b> <ul style="list-style-type: none"> <li>Developed a <b>CLI tool</b> that enables users to easily establish <b>secure vaults</b>, employing advanced cryptographic protocols such as <b>ECDH</b> for key exchange, <b>AES</b> for data encryption, and <b>HMAC</b> for ensuring message integrity.</li> <li>Github link: <a href="#">silicoflare/confidant</a></li> </ul> |

## Experience

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|---------------------|---|
| July 2024           | <b>Summer Intern</b> , TwoSpoon.ai – Bengaluru, India <ul style="list-style-type: none"> <li>Demonstrated expertise in <b>fullstack development</b> by constructing a website for a meme-based marketing agency, focusing on a highly responsive UI and role-based authorization. Additional responsibilities included setting up database CRUD operations and developing complex table relationships.</li> </ul> |
| June 2025 – present | <b>Summer Intern</b> , TwoSpoon.ai – Bengaluru, India   |

- Developing a web-based infrastructure management platform, complete with production environment setup, to streamline connectivity and view analytics for enterprise clients.

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## Skills

**Programming Languages:** Python, C/C++, Java

**Web Development:** TypeScript, Bun, Next, T3Stack, MERNStack, PostgreSQL, TailwindCSS, Clickhouse DB

**DevOps:** Docker/Podman, Git, Bash, PM2

**Add-ons:** Cryptography, Markdown

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## Education

2022 – present **PES University**, in *BTech in CSE (AI&ML)* – Bengaluru, India  
7.17 GPA (as per 6th semester)

2022 **Narayana PU College**, in *PUC* – Bengaluru, India  
Percentage: 95%

2020 **St. Francis de Sales Public School**, in *CISCE* – Bengaluru, India  
Percentage: 97%

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## Publications

Oct 2024 **Dynamic Crowd Management through Potential Field-Based Simulations**  
Samprith Jagtap D, **Suraj B M**, T Jaiwanth, Anushka Ghei, Srinivas K S  
[10.1109/ICSGSC62639.2024.10813704](https://doi.org/10.1109/ICSGSC62639.2024.10813704) [↗](#) (IEEE)

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## Hobbies

- **Reading:** Variety of genres like fiction, history, classical literature, contemporary writings, geopolitics, civics
- **Watching:** Police procedural dramas, crime, historical documentaries, gaming
- **Gaming:** Minecraft, Terraria, Grand Theft Auto series