SHUBH PATNI

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EDUCATION

Northeastern University	**Sep 2021 – May 2025**

Bachelor's Honors Computer Science and Economics

Relevant Courses: Networks, Database Design, OOPs, Data Structures and Algorithms, Information Retrieval, AI

Certifications: Stanford: Algorithm Specialization, Coursera: Nand 2 Tetris

PROFESSIONAL EXPERIENCE

Hometap	**Fulltime Remote**

Full Stack Engineer (Co-Op) — *Jul 2024 – Dec 2024*

- Innovated textract and OCR solution leveraging camunda, AWS, and implementing caching, slashing document processing time by 700%
- Engineered django scripts and migration files for seamless conversion of legacy user documents to new model
- Spearheaded development of new GraphQL and Django APIs, improving dashboard and form creation processes

Resme

Founder — *Feb 2024 – Present*

- Engineered a resume builder platform leveraging Next.js and TypeScript, integrating Zod, MongoDB, Next Auth, coupled with Server Actions and REST APIs for backend operations, and Zustand for state management
- Implemented a dynamic, real-time custom preview feature, enabling users to review updates instantaneously and download their resumes in PDF format. Achieved 95% on Lighthouse, Website currently serves over 1000 users

HFA Research	**Part-Time Remote**

Analyst — *Feb 2024 – Jul 2024*

- Developed an indepth research report on Bittensor, exploring its subnets and positioning it as a key player in the decentralized AI industry
- Engaged audiences through articulate and informative content, contributing to increased understanding and awareness within the crypto community

PROJECTS & OUTSIDE EXPERIENCE

Image Processing Software

- Implemented MVC and Command Design patterns to optimize a Java based image processing app
- Developed interactive Java Swing user interfaces and optimized algorithms for mosaic, histogram, and color transformations, enhancing user experience.

SMTP Server and PNG Encoder

- Created a custom SMTP server using Rust, showcasing strong grasp of programming concepts and SMTP protocol
- Designed and implemented a program for encoding and decoding information within PNG files, demonstrating advanced technical skills in data manipulation
- Innovated a project to hide information within PNGs, highlighting creativity and problemsolving abilities

Marble Solitaire

- Implemented object oriented design principles and utilised the builder pattern to develop a modular and maintainable marble solitaire game in Java.
- Demonstrated proficiency in object oriented design principles and creating optimised algorithms in Java.

Face ID for Mac

- Created the first working Face ID solution for Mac by leveraging Python, Selenium, Linux daemons, and Open CV
- Allows users to unlock devices without entering their password just like an iPhone.

NEU Gym

- Developed a website for university, empowering 25k students to discover the least crowded times for gym visits
- Leveraged D3.js to create interactive charts. Implemented cron jobs and computer vision OCR for automated data scraping, and PostgreSQL for robust data storage.

Ambulance

- In response to the COVID-19 pandemic, designed a web-based ambulance booking platform using Django. Incorporated real-time updates and notifications for both drivers and users upon booking confirmation through seamless integration with the Twilio API.

Pendulum

- Handpicked among just 16 teams by Lightspeed and Polychain Capital to pitch to a discerning audience of 50 VCs
- Orchestrated end-to-end development for Pendulum, encompassing smart contracts, frontend design, and contract integration using Next JS, Typescript, Wagmi, and Solidity

SKILLS & INTERESTS

Skills: Java, Rust, Next.js, Node.js, Django, JavaScript, Git, HTML/CSS, MongoDB, MySQL, Postgres, React.js, SQL, Python, TypeScript, R