SHUBH PATNI

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Professional Summary

I am a self-taught developer, ambitious beyond my means, a generalist, and someone who brute forces their way to solving a problem

EDUCATION

Northeastern University	**Sep 2021 - May 2025**

Bachelor's Honors Computer Science and Economics

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

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

HFA Research	**Part-Time Remote**
Analyst	*Feb 2024 - Jul 2024*

- Authored detailed research reports on crypto project investments, airdrop farming opportunities, and node running guides for projects like Fuel, Nillion, and XAI
- Developed an indepth research report on Bittensor, exploring its subnets and positioning it as a key player in the decentralized AI industry

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

Giaaka	**Freelance Remote**
Full Stack Developer	*Sep 2023 - Oct 2023*

- Spearheaded the creation of Norswap and led a team of 3 engineers to build a staking service in Next JS, MongoDB
- Proficiently designed and implemented the Frontend, Backend, API endpoints, and seamlessly integrated Smart Contracts within Norswap. Hosted the service on AWS using Nginx

Phemex	**Part-Time Remote**
Researcher	*Jan 2022 - Jun 2022*

- Crafted a comprehensive research paper delving into the intricacies of Avalanche network's tokenomics, fundamental aspects, and ecosystem, providing invaluable insights for informed investment decisions by Phemex exchange stakeholders.

DAO Maker	**Part-Time Remote**
Researcher	*Jun 2022 - Aug 2022*

- Thoroughly examined tokenomics and formulated investment strategies for prominent DeFi products, including GMX, GHO, and DAO. The strategies helped 650k subscribers make informed investment decisions
- Conducted a comprehensive market analysis of pivotal events within the web3 space, such as the Ethereum merge, 3AC collapse, Taro developments, and the Lightning Network, assessing their direct impact on associated assets.

Northeastern University	**Part-Time Boston, MA**
Teaching Assistant	*Sep 2022 - Dec 2022*

- Exceptional teaching assistant at Northeastern University, specializing in Discrete Structures in Computer Science.
- Fostered understanding of complex concepts in Discrete Structures through engaging 1 on 1 Q&A with students

Help Uddaan Foundation	**Part-Time Bangalore**
Co-Founder	*May 2018 - Apr 2020*

- Launched a song to disseminate awareness about COVID-19, resulting in the mobilization of resources to provide nourishment for more than 1,000 impoverished families in India.

PROJECTS & OUTSIDE EXPERIENCE

NEU Gym

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

Learn AI
- Developed "Learn AI", encompassing four core AI functionalities: face recognition, image detection, music generation, and image synthesis. Independently trained SSD, YOLOv3, and LSTM neural networks to power the respective AI capabilities
- Crafted an interactive web application using Django and Python, providing users a hands-on experience with AI techniques.

Portfolio Website
- Designed and deployed a personal website using Next.js, TypeScript, and hosted on Vercel, showcasing an extensive collection of over 100 articles and a myriad of personal projects.
- Crafted an intuitive user experience, ensuring seamless navigation and optimal engagement for visitors exploring my professional journey and insights.

Verifund
- Secured victory at Harvard University's Hack Boston competition for crafting the top solution on the Telos blockchain.
- Engineered smart contracts for a distinctive crowdfunding platform utilizing Solidity, enhancing the landscape of fundraising

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

Actions
- Secured victory in the prestigious Lion Hack for Cyber Connect track at Columbia University.
- Developed a semi-functional social media platform within a remarkable 24-hour timeframe.

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.

Image Processing Software
- Employed Model-View-Controller and Command Design patterns to create an efficient Java-based image processing software.
- Designed interactive Java Swing user interfaces and crafted algorithms for mosaic, histogram, and color transformations.

Marble Solitaire
- Executed object-oriented design principles and leveraged the builder pattern to craft a modular marble solitaire game in Java.

Uniswap V1, V2, V3
- To master DeFi Basics, re-implemented core and peripheral contracts for Uniswap V1 and V2, showcasing a thorough grasp of CPMM, TWAP, and essential mathematical concepts.
- Implemented core contracts for Uniswap V3 such as re-implementing ticker math, liquidity management and swapping

Ethernaut
- Successfully secured Ethereum smart contracts by completing challenges up to level 19 in the Ethernaut Security Challenge using Solidity
- Applied best practices in blockchain security to identify vulnerabilities and hacked smart contracts to learn
- Enhanced knowledge of blockchain security principles through handson experience in the Ethernaut Security Challenge

Learning Rust
- Successfully 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

SKILLS & INTERESTS

Skills: Java, Next.js, Node.js, AWS, Django, GraphQL, JavaScript, Git, HTML/CSS, MongoDB, MySQL, Postgres, React.js, Redux, REST APIs, SQL, Python, TypeScript, Web Development, Software Testing, Arduino, R

Interests: Finance, Backpack traveling, Skateboarding, Calisthenics, Reading, Guitar, Twitter, Coding