Nicholas Carnevale

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EDUCATION

Lehigh University, Honors College, Bethlehem, PA   September 2021-May 2025
Bachelor of Science in Computer Science and Business   GPA: 3.9
Relevant Coursework: Algorithms, Software Eng., Databases, OS, Machine Learning, Blockchain, Finance, Marketing

SKILLS

Languages   **Expert:** Python, Java, SQL| **Proficient:** Rust, C++, TS, JS, HTML, CSS | **Familiar:** C, Go, Solidity, Swift
Technologies   Node JS, React JS, Postman, Docker, Git, Linux, PostgreSQL, MongoDB, Spring Boot, Heroku, AWS, Jest

EXPERIENCE

Macguyver Technologies   January 2024-December 2024
Software Engineer, Product Manager   Remote
- Enhanced the security of smart contracts by developing a scanning module for MTech's cybersecurity app, PVA.
- Designed and integrated a python module into their FastAPI backend that identifies various levels of security vulnerabilities, significantly improving the application's ability to detect risks in deployed solidity code.
- Leveraged Llama-index AI libraries and fine-tuned Llama-3 LLM to analyze and detect errors in smart contracts
- Developed API endpoints to automate vulnerability identification, generating detailed reports for targeted users.
- Led the team as Scrum Leader, ensuring weekly delivery of project milestones through Agile proj. management.
- Ultimately delivered a robust security module that contributed to the enhancement of PVA's security features, directly supporting the company's goal of providing comprehensive cybersecurity solutions for blockchain apps.

Lehigh University   May 2024-Present
Blockchain Researcher : Blockchain Benchmark Standardized Framework   Bethlehem, PA
- Extended a framework to standardize benchmarking blockchain performance from Layer-1 (L1) to Layer-2 (L2)
- Simulated multi-node networks using Docker and communicated with Sui devs to generate reliable metrics.
- Finished benchmarking L1 technologies including Etheruem, Quorum, Sui and Aptos, soon to publish results
- Conducted in-depth research on L2 technologies, identified bottlenecks and proposed benchmark methodologies.
- Collaborated on a scholarly paper detailing the challenges and strategies for L2 benchmarking, contributing to the practical understanding of blockchain scalability and highlighted an overview of the current state of L2s
- Strived towards the ultimate goal of providing transparent, comparable performance metrics for blockchains.

Devola Technologies   May 2023-August 2023
Software Engineer Intern, Marketing Intern   Remote
- Developed a functional automated emailing service module, enhancing customer engagement for businesses.
- Collaborated with a Ukrainian team to build a secure Node.js backend, implementing robust user authentication and seamless Stripe payment integration.
- Designed and tested RESTful APIs for core functionalities, ensuring high reliability through Postman.
- Wrote comprehensive unit tests using Jest to validate core backend features, achieving over 90% code coverage.
- Conducted beta testing with selected users to gather feedback, identify issues, and improve system usability.

PROJECTS   + more available on github

Congressional Trade Tracking
- Automated data pipeline that parses, filters, and validates congressional financial disclosures from XML and PDF formats, ensuring accurate tracking and updates to large datasets. Future work: AI trading bot

BUZZ Social Media Application
- Created a full stack app built for Lehigh students, similar to reddit; worked with team of 4, Waterfall methodologies
- React frontend, Express.js backend, Flutter mobile and java CLI interface, Deployed with AWS EC2

INVOLVEMENT: Lehigh Club Soccer, Lehigh CSB Assn., Lehigh Blockchain, ATO Fraternity