Pranav Shukla

(248) 403-0495 | pranavshuklajobs@gmail.com | github.com/codebypranav | linkedin.com/in/pranavshuklafts | pranavshukla.com
U.S.A. and Canada Citizen

WORK EXPERIENCE

Ford **Dearborn, MI**
Software Engineer *Mar 2025 - Present*

- Owned deployment and operation of a production analytics system used by manufacturing leadership to monitor plant-wide quality metrics across multiple facilities.
- Designed and implemented end-to-end data flows (GCP → Flask APIs → React/D3 dashboards), balancing latency, correctness, and operational simplicity in a live production environment.
- Reduced data retrieval latency from ~2 minutes to ~15 seconds by diagnosing system-level bottlenecks across queries, concurrency, and service architecture.
- Served as the technical point of contact for clarifying ambiguous requirements, diagnosing production issues, and making tradeoff decisions based on stakeholder and operational constraints.

Vanguard **Malvern, PA**
Software Engineer Intern *May 2024 – Aug 2024*

- Delivered automation for ETF trading workflows, reducing operations and contributing ~$8M in annual cost savings.
- Improved system reliability using Splunk and Postman to debug failures and reduce testing cycles by ~30%.
- Led delivery of a GDP nowcasting project, coordinating engineering efforts and acting as technical liaison for stakeholders.

Vanguard **Malvern, PA**
Software Engineer Intern *May 2023 - Aug 2023*

- Built and iterated on analytics tools (React, D3) used by traders, incorporating feedback from non-engineering stakeholders.
- Diagnosed and optimized performance-critical systems across Python and TypeScript services, improving throughput by 5–25% in live financial environments.

Vanguard **Malvern, PA**
Software Engineer Intern *May 2022 - Aug 2022*

- Constructed cloud infrastructure using SpringBoot that connected traders with real-time data suppliers, saving over $100K monthly, and automated data cleanup via AWS Lambda functions with Python's boto3 to cut storage costs.
- Configured 30+ Atlassian Bamboo CI/CD pipelines with YAML to optimize deployments for AWS-hosted services.

PROJECTS

AirFleet *Jan. 2025 - Present*

- Designed and built a full-stack aviation analytics platform integrating secure authentication, scalable PostgreSQL storage, and AI-assisted log summarization, reducing pilot data review time by ~40% and improving decision efficiency.

Henry Ford Health – Research Synergy Vanguard Portal *Sep. 2024 - Dec. 2024*

- Integrated Elasticsearch into a Flask-based API to improve researcher discovery and collaboration, and automated data ingestion from external clinical directories to maintain up-to-date records.
- Automated the extraction of critical research data from Henry Ford's "Find A Doc" system using Python's BeautifulSoup4 and designed intuitive React.js UI components to ensure a seamless user experience.

SpartaHack X - WasteWise *Feb. 2025*

- Developed a smart waste bin system with React and Flask, integrating an ESP32-S3 and ultrasonic sensor for monitoring.
- Leveraged PyTorch and Torchvision to train a computer vision model that classifies waste types and triggers alerts.

SKILLS

Languages/Frameworks: Python, C++, JavaScript, TypeScript, Java, C, SQL, HTML5, CSS, Next.js, React, Flask
Technologies: Docker, AWS, GCP, PostgreSQL, Linux, PyTorch, TensorFlow, Cursor, Claude Code, GitHub Copilot, ChatGPT

EDUCATION

MICHIGAN STATE UNIVERSITY **EAST LANSING, MI**
B.S. Computer Science *Sep. 2020 – Dec. 2024*

- *Courses*: Data Structures & Algorithms, Discrete Structures, Computer Architecture & Organization, Web Development, Computer Systems, Computer Graphics, Mobile Development, Big Data Analysis, Biometrics and Pattern Recognition