ARNIT SINHA

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EDUCATION

Clarkson University   May 2026
Bachelor of Science in Electrical and Software Engineering   *Potsdam, NY*
- **Relevant Coursework**: Object Oriented Programming, Data Structures, Algorithms, Digital Design, Embedded Systems, UI/UX Design
- **Awards**: Commendable Service: Phalanx Honors (Apr 2024), Dean's List (May 2023, May 2024), Ignite Presidential Fellow (Aug 2022)

EXPERIENCE

Cvrve   Aug 2024 – Present
Software Engineer Intern   *Manhattan, NY*
- Built a high-performance URL redirect service handling over **3.6 million requests** per month using **ClickHouse, Express.js, and Redis** for caching.
- Built automated hackathon aggregation platform using **Python** and **BeautifulSoup4**, featuring real-time **WebSocket** notifications and concurrent collection from Major League Hacking, Devpost, and LabLab.
- Created a platform to apply to and track job applications attracting over **100,000 unique visitors** seeking internships and entry-level opportunities.

C Speed   May 2024 – July 2024
Software Engineer Intern   *Syracuse, NY*
- Developed a data visualisation website with **Angular** and **TypeScript** for real-time radar data visualization, integrating **Chart.js** and **OpenLayers** to deliver an enhanced experience for over 1,200 daily users.
- Built a scalable backend using **Django**, **PostgreSQL**, and **RabbitMQ**, enhancing real-time data management for radar systems and efficiently processing over 250,000 data points per second.
- Engineered a travel router in **C#** by modifying the **OpenWRT binary**, integrating GPS, a UVC Camera, and using ML.NET for real-time image analysis and alerts.

PROJECTS

WaterCheck | *Python, PyTorch, Next.js, TypeScript, AWS* | *Calhacks*
- Built PyTorch-based anomaly detection for water meters, achieving 90% accuracy on test dataset during live demo.
- Architected serverless system with AWS Lambda, integrating PostgreSQL for meter data processing.
- Integrated **OpenCV**-based meter reading system, automating consumption tracking through image processing.

HeyHoo | *NextJS, WebRTC, Hugging Face, Python, OpenCV, FastAPI, Redis, TypeScript* | *HooHacks*
- Built a vision assistant using **NextJS** and **WebRTC**, enabling real-time camera feed processing and voice navigation.
- Integrated speech recognition system using **Hugging Face** models, processing commands with **300ms** latency.
- Architected **Python** backend with **OpenCV**, enabling object detection through device camera with audio feedback.

Academ.ai | *Python, OpenAI, Langchain, Cloud SQL, PyQt6, Docker, JavaScript* | *HackRPI X*
- Engineered LLM-powered scheduling system with **Google Calendar API**, handling 100+ concurrent study plans.
- Built responsive **React** and **Tailwind** dashboard featuring drag-and-drop schedule editing and real-time updates.
- Developed cross-platform desktop client with **PyQt6**, enabling offline schedule creation and local storage.

TECHNICAL SKILLS

Languages & Frameworks: Python, TypeScript, C++, C#, React.js, Node.js, Express.js, NextJS, Tailwind CSS
Development Tools: Git, Docker, Postman, Vercel, Linux, AWS, Google Cloud, Azure, Heroku, CI/CD
Databases & Infrastructure: MongoDB, MySQL, PostgreSQL, Redis, Cloud SQL, WebSocket, REST APIs, GraphQL
Machine Learning & AI: OpenAI, Langchain, Hugging Face, OpenCV, Natural Language Processing