

ARNIT SINHA

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EDUCATION

University Of Technology Sydney

Sydney, NSW

Fall 2024 - Study Exchange

- **Relevant Coursework:** Network Engineering, Database Programming, Robotics, Signals and System Processing

Clarkson University

Potsdam, NY

Bachelor of Science in Electrical and Software Engineering

Expected Graduation: May 2026

- **Relevant Coursework:** Object Oriented Programming, Digital Design, Embedded Systems, UI/UX Design

EXPERIENCE

CSpeed, LLC

May 2024 – July 2024

Software Engineering Intern

Syracuse, NY

- Developing an interactive frontend with **Angular and TypeScript** for real-time radar data visualization, using **Chart.js and OpenLayers**.
- Building a scalable backend with **Django, PostgreSQL, and RabbitMQ** for efficient real-time data management.
- Designing a travel router with **C#** modifying the vanilla OpenWRT binary integrating a GPS module, UVC, and Block camera, and using **ML.NET** for real-time image analysis and alerts.

Cvrve

Dec 2023 – May 2024

Software Engineering Intern

Manhattan, NY

- Led the architectural design discussions, conceptualizing and implementing scalable solutions using **Next.js** framework.
- Executed a successful migration plan to **PostgreSQL**, enhancing data management capabilities in handling large-scale datasets.
- Designed and deployed a feature flagging system integrated with **AWS Lambda** and **MongoDB**, effectively reducing operational costs and improving service reliability.

PROJECTS

HeyHoo | React, Tailwind CSS, Hugging Face Transformers, MongoDB, Python | HooHacks 2024

- Engineered an AI-powered vision assistant using **React and Tailwind CSS** for visually impaired individuals, enabling independent navigation through voice commands.
- Integrated **natural language processing (NLP)** with **Hugging Face Transformers** and **Python**, allowing users to interact via a "HeyHoo" command to inquire about their surroundings and engage in follow-up conversations.
- Implemented advanced object recognition algorithms in **Python**, utilizing **MongoDB** for data storage to accurately describe objects, scenes, and text, enhancing inclusivity for visually impaired users.

Academ.ai | Python, OpenAI, Langchain, Cloud SQL, PyQt6, Docker, JavaScript | HackRPI X

- Designed an educational tool to generate personalized study schedules, enhancing individual engagement
- Developed validation tests using **Google Data Validation Tool (DVT)** for **Cloud SQL** reliability and functionality
- Utilized **PyQt6** to create an intuitive graphical interface (GUI) for academ.ai, enhancing user accessibility

TECHNICAL SKILLS

Languages & Web: C, C++, C#, Python, TypeScript, Vue.js, HTML5, CSS3, JavaScript, Bash

Tools & IDEs: SVN, Linux, Visual Studio Code, JetBrains PyCharm, NumPy, Pandas, TensorFlow

Python Libraries: BeautifulSoup, FastAPI, Matplotlib, OpenCV, Plotly, PySpark, Scikit-learn

Database Tools: Cassandra, MongoDB, MySQL, SQLite, Redis, Elasticsearch

Cloud Platforms & DevOps: AWS (S3, DynamoDB, ECS), Google Cloud (GCE, BigQuery), Docker, Kubernetes

AWARDS

Commendable Service: Phalanx Honors - Clarkson University - Apr 2024

Dean's List: Clarkson University - May 2023 and May 2024

Ignite Presidential Fellow: Clarkson University - Aug 2022

(A four-year full scholarship; 1 of 7 selected from a 1000 applicants.)