

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

- Developed an interactive frontend with **Angular and TypeScript** for real-time radar data visualization, leveraging **Chart.js and OpenLayers** for dynamic and responsive visualization of radar data.
- Achieved high scalability in real-time data management as measured by **handling 1000+ concurrent connections**, by building a robust backend with **Django, PostgreSQL, and RabbitMQ**.
- Designed a custom travel router with **C#**, integrating **GPS module, UVC, and Block camera** into the OpenWRT binary, and utilizing **ML.NET** for advanced real-time image analysis and alert generation.

Cvrve

Dec 2023 – May 2024

Software Engineering Intern

Manhattan, NY

- Achieved **40% improvement in scalability** by a successful adoption of **Next.js** framework, by orchestrating and implementing cutting-edge architectural design discussions.
- Boosted application reliability by **reducing downtime by 50%** as measured by **seamless integration of RESTful APIs**, by orchestrating cross-functional collaboration on API integration strategies.
- Drove a **25% increase in user engagement metrics** as measured by implementation of **Redux** for optimized state management, by the development and deployment of highly interactive web applications.

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 and a custom calendar, enhancing individual engagement and time management for users.
- Utilized **PyQt6** to create an intuitive graphical interface (GUI) for academ.ai, enhancing user accessibility.
- Developed validation tests using **Google Data Validation Tool (DVT)** for **Cloud SQL** reliability and functionality.

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.)