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 **Node.js** and **Angular** frameworks.
- Executed a successful migration plan to **MySQL**, enhancing data management capabilities and ensuring robustness in handling large-scale datasets.
- Designed and deployed a feature flagging system integrated with **AWS Lambda** and **DynamoDB**, 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.)