Sarthak Kakkar

Boston, Massachusetts | +1 (857) 313 2670 | kakkar.sar@gmail.com | linkedin.com/in/sarthakkakkar03 | https://skakkar.netlify.app/

Computer Science Student at Northeastern | Embedded Systems • AI/LLMs • Full-Stack Development

EDUCATION

Bachelor of Science in Computer Science | Business Administration minor

Northeastern University, Khoury College of Computer Science | Boston, MA | GPA: 3.70 | 05/2026

WORK EXPERIENCE

Movement NeuroScience Lab | Boston, USA | 01/2025 - 06/2025

Embedded Systems Engineer Co-op | Full-time

- Independently built a research-grade system integrating stimulators, Bluetooth force sensors, and control modules for human experimentation.
- Re-architected a vendor API into an async, modular platform adaptable across multiple research projects and device configurations.
- Reverse-engineered undocumented BLE hardware and created Python APIs for real-time data streaming and device control.
- Built pipelines that converted raw data into clinician-ready visualizations and statistical reports for IRB-approved studies.

Northeastern University | Boston, USA | 09/2024 - 12/2024

Teaching Assistant | Part-time

- Supported 100+ students through grading, code reviews, and office hours, ensuring consistent academic standards.
- Independently delivered a lecture on smart pointers, guiding students through concepts and live coding exercises.

Wissen Infotech | Bangalore, India | 06/2024 - 08/2024

LLMOps Intern | Full-time

- Designed a code-conversion accelerator projected to cut migration timelines by 2–3 months across client systems.
- Built a LangChain/LangGraph feedback loop enabling autonomous error detection, targeted regeneration, and early stopping.
- Delivered prototypes and technical demos to leadership and prospective clients, directly influencing business strategy.

Applify Tech Private Limited | Mohali, India | 07/2023 - 08/2023

Intern | Full-time

- Contributed to backend Java development with RESTful APIs, SQL queries, and JDBC database integration.
- Wrote unit tests with JaCoCo and assisted in debugging production code to improve reliability.
- Collaborated in an agile environment using Git and JIRA, documenting workflows and aligning sprint goals with client needs.

PROJECTS

Squegg Python API

- Reverse-engineered the BLE protocol of the Squegg smart squeeze ball to enable desktop integration.
- Developed an open-source Python API for streaming grip strength, battery status, and real-time notifications.
- Packaged the tool into an executable with PyInstaller for deployment in medical research environments.

AI Powered Communication Assistant

- Developed an AI-powered workflow to handle professional profile inquiries and enhance communication efficiency.
- Implemented real-time AI notifications with inquirer details (name and email) for effective follow-up.
- Built with LangChain, LangGraph, and LangServe, applying the supervisor architecture.

PUBLICATIONS

Mapping the Typographic Latent Space of Digits | 04/2023

International Conference for Learning Representations

Used disentangled Beta-VAE's in an unsupervised learning approach to map latent feature spaces with a dataset of MNIST Style Typographic Images across 2990 unique font styles, helping typographers explore new attributes for their classification systems.

SKILLS

Programming Languages: C++, Java, JavaScript, OCaml, Python, SQL, TypeScript

Frameworks & Libraries: LangChain, LangGraph, Matplotlib, NumPy, Pandas, PyTorch, React, scikit-learn, Tailwind CSS

Systems & Tools: Git, GitHub, JIRA, Linux, Netlify, Streamlit

Software Development: Agile, API Development, Async Programming, CI/CD, Object-Oriented Design (OOD), Unit Testing

Machine Learning & Data Science: Data Visualization, Deep Learning, PCA, Random Forest, Regression