Kailin Xing

Boston, Massachusetts | +1 (617) 777-7608 | kailinxgoogl@gmail.com | linkedin.com/in/kailinx | github.com/kailinxGitHub

Education

Northeastern University Sep 2023 – May 2027

Bachelor of Science in Computer Science, Minor: Computer Engineering | GPA: 3.6/4.0 *Boston, Massachusetts*

- **Relevant Coursework**: Software Engineering, Data Structures and Algorithms, Object-Oriented Design (Java), Computer Operating Systems, Database Design, Computer Architecture, Networks
- **Competitions**: Harvard Undergraduate Trading Competition 5th Place Overall, 3rd Place News-Based Trading

Technical Skills

Languages: Python, JavaScript, TypeScript, C, C++, SQL, Java, HTML, CSS
Frameworks & Libraries: React, Next.js, Vue.js, Django, Express.js, Node.js, Tailwind, Bootstrap, Selenium, Scrapy, BeautifulSoup, pandas, Streamlit, TensorFlow, NLTK, CUDA, PyTorch, TorchMetrics, OpenMP, Pthreads, OpenCV
Cloud & Databases: PostgreSQL, MySQL, AWS (Amplify, ECS, EC2, ELB), GCP (GKE, Ingress), Pinecone
DevOps & Tools: Docker, Kubernetes, Terraform, Redis, Celery, Slurm, Bash/Shell, Agile (Scrum), Nsight Systems

Experience

Boston Red Sox Jul 2025 – Present

Software Engineer Co-op *Boston, Massachusetts*

- Shipped features and bug fixes across **15+ projects** in Agile sprints, accelerating production release cycles.
- Migrated legacy applications from **C#/.NET** to Django and Vue.js, modernizing the technology stack.
- Architected resilient backend APIs and data models using Django MTV and PostgreSQL, impacting **500+ users**.
- Debugged GCP production incidents, reducing deployment failures by **40%** using Kubernetes and Terraform.
- Enhanced code quality and team velocity by reviewing **50+ pull requests** across backend and frontend on all apps.

Northeastern University Computer Architecture Research Lab May 2024 – Present

Software Engineer/Research Assistant *Boston, Massachusetts*

- Accelerated edge detection speed by **200%** over OpenCV on GPU using **CUDA** and Nsight Systems.
- Analyzed batch-sizes across LLaMA, RNN, Transformer, and MLP models with Numpy, **PyTorch** and **TorchMetrics**.
- Standardized CNN training pipelines on CIFAR-10 and FashionMNIST with **CUDA**, delivering **40%** faster epochs.
- Achieved 3x CPU speedups by parallelizing compute-intensive kernels with **Pthreads** and **OpenMP**.
- Automated machine learning HPC runs on Linux with **Slurm** sbatch **Bash** scripts for reproducibility.

Projects

International Student Data Platform August 2025 – Present

- Architected analytics platform **reducing time-to-insight 40%** using Express.js (Apollo GraphQL), Prisma, PostgreSQL.
- Improved search relevance for **400K+ employers** via **Meilisearch** tuning and Redis caching.
- Reduced p95 latency 60% with **Node.js** and Apollo GraphQL optimizations, input validation, and rate-limiting.
- Automated CI with Jest, Playwright, GitHub Actions; halved pipeline time, doubled releases.
- Reduced **AWS** spend **2K/month** by right-sizing Docker services and caching background workloads.

Baseball Game Management Dashboard Jul 2025 – Sep 2025

- Shipped production releases serving **300+ users** for an outward-facing management portal.
- Structured modular server-side backend with 20+ models and serializers using **Django** MTV.
- Implemented real-time, low-latency ingestion using Celery, Redis, and **PostgreSQL**-backed REST APIs.
- Maintained zero downtime on GCP by managing **Kubernetes** GKE Ingress using Terraform CI/CD on GitHub Actions.
- Engineered 20+ views and templates with JavaScript **Vue.js**, Tailwind CSS, and Bootstrap.

edgedetectr.com Dec 2024 – Mar 2025

- Shipped a fullstack edge detection platform with **100+ monthly users** and 99% uptime.
- Implemented 5+ operators in **C++** with **OpenMP** using polymorphism and Factory Pattern.
- Deployed containerized services on **AWS** ECS with **Docker** behind ELB, frontend via AWS Amplify.
- Architected safeguarded REST API endpoints with rate limits and spike prevention in **Express.js** and **Node.js**.
- Developed 30+ responsive components and seamless uploads with **JavaScript**, **React**, and **Next.js** across devices.