

SUMMARY

Software Engineer with MS in CS specializing in full-stack development. Published developer tools with 1000+ downloads achieving 4x speedup, built production web applications with real-time collaboration features.

TECHNICAL SKILLS

- **Languages** – C, C++, Java, Python, JavaScript, Typescript, SQL, CUDA, HTML/CSS
- **Frameworks** – React, NestJS, Flask, Socket.IO, Express.js, PyTorch
- **Tools/Platforms** – Docker, Kubernetes, Git, AWS, PostgreSQL, MongoDB, Redis
- **AI/ML** – PyTorch, CUDA Programming, OpenAI API, Hugging Face, ChromaDB, LangChain
- **Certifications:** AWS Certified Developer Associate (Verify: f0fd47213d0e4b46b3b906cf281c5d5f), CKAD (LF-kxb50uwooj)

WORK EXPERIENCE

Venture Development Center, UMass Boston, MA

August 2024 – May 2025

Software Developer

- Built **API integration platform** with automated workflows for Airtable and external web services, shipping in 2 weeks - now processing 50+ daily requests serving **15+ startup** companies.
- Optimized **system costs 85%** by implementing local deployment architecture and **tiered processing system**, collaborating with team in daily standups to design **scalable backend infrastructure** supporting **multiple concurrent users** across 15+ companies.
- Developed **React dashboard** with TypeScript and SSE for **real-time** streaming, **debugged performance issues** using useReducer after useState caused re-render problems with rapid updates.

Landmark Ventures, India

January 2022 – July 2023

Software Engineer Intern

- Built React property analyzer with **Chart.js** visualizations and filtering using Redux for **state management**, growing from 2 beta users to entire team - enabling 3x faster deal evaluation.
- Automated property reporting with Python using pandas for data transformation and **BeautifulSoup** for web scraping alongside **Zillow/Redfin APIs**, reducing reporting from **8 hours to 1 hour** weekly.
- Developed **Python automation suite** including cron jobs for scheduled tasks and error handling with logging, training team on Git basics - eliminating ~5 hours of manual work weekly.

TECHNICAL PROJECTS

Mustard Watch Party | github.com/JonSnow1807/Mustard-Watch-Party

- Built **real-time video synchronization** platform using React, NestJS, and Socket.IO WebSockets achieving **sub-500ms sync latency** between clients through optimized event handling and operational transformation algorithms for collaborative user experiences.
- Implemented **JWT authentication**, **PostgreSQL/Prisma persistence**, and Docker deployment supporting multiple concurrent rooms - designed **scalable architecture** for production-ready collaborative applications.

PyTorch AutoTune | pypi.org/project/pytorch-autotune | 1000+ downloads

- Built **Python developer tool** achieving **4.06x training speedup** by automatically detecting GPU hardware and applying optimizations (torch.compile, mixed precision, fused optimizers) - benchmarked ResNet-50 from **12 to 3 seconds per epoch**.
- Published to **PyPI with 1000+ downloads**, measured **36% energy reduction** - released 3 versions with **automatic hardware fallbacks** for T4/V100/A100 GPUs.

ChatGPT Spark Chrome Extension | <https://chromewebstore.google.com/detail/chatgpt-spark/bieoffmnbcajoahiljjbhffeccojpop>

- Developed **Chrome extension** using React/TypeScript frontend and FastAPI backend - implemented **semantic search with vector embeddings** for **instant conversation retrieval** and real-time prompt analysis to enhance user productivity.
- Published to **Chrome Web Store** achieving **4.8-star** rating with **300+ active users**, saves 30+ minutes daily for power users through intelligent conversation memory and **90% accuracy** in finding relevant past conversations.

Student Scheduler | github.com/JonSnow1807/student-scheduler

- Built **constraint optimization** system using Google OR-Tools scheduling **500+ students** with zero conflicts, implemented **Flask/PostgreSQL/Redis** backend with **Docker/Kubernetes** deployment achieving 60-second optimization runtime.
- Designed **RESTful APIs** with automated testing and CI/CD pipeline using GitHub Actions, demonstrating **production-ready containerization** and DevOps practices for scalable web applications.

OPEN SOURCE CONTRIBUTIONS

- Fixed default setting for dynamic shapes in torch.compile improving developer experience - **PR #158985** merged into PyTorch.
- Published medical OCR model (**131 downloads**) and prescription dataset (**324 samples**) on Hugging Face Hub enabling healthcare AI research | huggingface.co/chinmays18

EDUCATION

University of Massachusetts Boston, Boston, MA

September 2023 – May 2025

Master of Science in Computer Science

Lakshmi Narain College of Technology, MP, India

September 2019 – May 2023

Bachelor of Technology in Computer Science