Jack Dreifus

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EDUCATION

Northeastern University, Khoury College of Computer Sciences — **Boston, MA**
Candidate for a Bachelor of Science in Computer Science — **Sep. 2023 – Expected May 2027**

Honors:	Cumulative GPA: 4.0/4.0, Dean's List (all semesters)
Relevant Coursework:	Algorithms, Object-Oriented Design, Database Design, Cybersecurity, Programming in C++

TECHNICAL KNOWLEDGE

Languages:	Java, Python, TypeScript, C++, HTML, CSS, SQL
Frameworks/Libraries:	React, Next.js, Node.js, Spring Boot, FastAPI, Flask, Express.js, Prisma, SQLAlchemy, Tailwind, MUI
Technologies:	RESTful APIs, Docker, PostgreSQL, MySQL, AWS, Git, Postman, ChromaDB, Figma, Relume

EXPERIENCE

Software Engineer & Tech Lead Co-op – Verizon X NExT Consulting, *Boston, MA* — **Jul. 2025 – Present**
- Developing an automated sentiment and network data processing application for Verizon's geospatial issue hotspot detection system, optimizing backend infrastructure for targeted investment and customer retention analytics
- Architected FastAPI RESTful backend using three-layer (route → service → repository) domain-specific architecture, implementing Pydantic validation with case transformers and AWS Cognito pool integration for secure authentication
- Optimized data pipeline with Faker/Factory Boy mock generation and upgraded TanStack Query hooks for enhanced caching
- Leading technical coordination across 6-engineer pod, assessing feature risks and communicating project progress with PMs

AI Trainer, Software Development – DataAnnotation, *Remote* — **May. 2025 – Aug. 2025**
- Evaluate AI-generated code across Java, Python, and TypeScript for correctness, performance, and readability
- Collaborate with AI software teams to refine prompts, debug outputs, and provide model-improving technical feedback

Web Developer Internship – Lighthouse Launch Fund, *Remote* — **Feb. 2025 – Jun. 2025**
- Designed and developed Lighthouse's official website using React, Next.js, and Tailwind CSS, helping establish the company's online presence and mission to attract potential SaaS founders and investors as a venture capital search fund
- Collaborated closely with founder through iterative design reviews, translating Figma prototypes into responsive features
- Integrated dynamic functionality, including contact forms (via Nodemailer) and scheduling tools (via React-Calendly), resulting in an 85% increase in profile visits and improved client engagement

Software Tech Lead – Northeastern Electric Racing, *Boston, MA* — **Jan. 2024 – May. 2025**
- Led finance page redesign for full-stack PM dashboard using Agile methodologies, expanding functionality by 300%
- Built club-sponsoring vendor pages using React components, pagination, custom hooks, and MUI components, advancing the financial team's ability to track sponsoring vendors and reimbursements, enhancing UI responsiveness and functionality
- Developed backend endpoints for club onboarding, recruitment, and finance features using Express.js and Prisma queries, ensuring role-based access control and 100% uptime with Jest unit tests and integration testing via Postman
- Conducted weekly standup meetings, managed tickets, pull requests, and code reviews within a 20+ developer team

PROJECTS

ResearchCompass — **Ongoing Development**
- Developing a research discovery platform for Khoury College faculty, leading backend design and system architecture
- Built scalable Flask architecture with SQLAlchemy ORM querying MySQL, integrating ChromaDB embeddings and SBERT all-MiniLM-L12-v2 algorithm to match user articles with relevant journals and research papers from ArXiv and DOAJ datasets
- Designed enterprise-grade auth system using AWS Cognito User Pools with secure JWT passing via custom Axios client and TanStack Query hooks, implementing Flask-Cognito JWT validation ensuring secure access for academic researchers
- Delivered 4 stakeholder presentations for research faculty to showcase system architecture and project milestones

RoomieSync *First Place – 2-Day Club-Wide Hackathon* — **Ongoing Development**
- Created a roommate organization app designed to simplify shared living by managing expenses, alarms, and dividing chores
- Engineered full-stack Spring Boot application with PostgreSQL integration and Next.js frontend leveraging TanStack Query
- Built custom JWT auth system using BCrypt encoding integrated with Spring Security ensuring user protection and validation
- Dockerized containers for frontend, backend, and database services using Docker Compose, offering seamless development

INVOLVEMENTS & INTERESTS

Involvements:	Northeastern Men's Lacrosse, Northeastern Electric Racing, Kappa Theta Pi Technology Fraternity
Interests:	Bob Dylan Enthusiast, Japanese Kitchen Knives, Canoe Expeditions, Boston Sports, Western Films