

ABOUT ME

I'm a web developer rooted in domain driven design and resilience. Previously in medicine, I found myself frequently combining domain knowledge with programming skills to build tools for myself and others, and switched careers to software development to focus on building my skills. Skilled in microservice architecture and a wide array of technologies including TypeScript, Python, GraphQL, React, and LangChain. I believe in taking the time to learn something well and apply it to any given task.

EXPERIENCE

Software Engineering Intern 2024 - Present
LA Film Lab and Studio, Los Angeles CA

Developed full-stack solutions with component-driven architecture using TypeScript, Nuxt.js, and Node.js with Supabase as the backend-as-a-service, delivering mission-critical features that drove operational efficiency and customer engagement beyond growth expectations for a team of our size.

- Developed an automated data synchronization API endpoint that retrieves and updates order information between Square's e-commerce platform and a Supabase database, processing batch transactions with error handling and real-time status tracking. Implemented using Node.js, Square API, and Supabase, resulting in seamless order management across multiple systems and platforms
- Implemented real-time event architecture with SSE and REST APIs achieving <100ms latency, enabling instant order updates across all platforms
- Developed optimized order management system that reduced processing time by 25% and eliminated manual errors through smart caching
- Built robust, maintainable codebases using the Model-View-Controller (MVC) pattern and PRPL (Push, Render, Pre-cache, Lazy-load) strategy, resulting in improved page load metrics and maintainable component-based structure.

Web Developer (contract) 2023 - 2024
Greater Boston Snow Removal, Boston MA (Remote)

Architected and implemented scalable microservices platform that transformed company into Boston's market leader, growing from 4 to 80+ employees through automated dispatch and real-time tracking

- Designed event-driven microservices architecture using TypeScript and Node.js, achieving 99.9% uptime during peak snow events with 1,000+ daily transactions
- Built location-based worker matching system using Google Cloud API and MongoDB geospatial indexing, reducing dispatch time by 75% and increasing worker efficiency by 40%
- Implemented robust security infrastructure with JWT-based authentication, role-based access control, and API gateway patterns to ensure secure data access across microservices

Jonathan Young

Web Developer rooted in domain driven design, resilience, and problem solving skills.



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US citizen

EDUCATION

Per Scholas

Software Engineering
Track, GPA: 4.0

2024

Completed intensive training in enterprise software development practices and Agile methodologies, achieving top performance (4.0 GPA) while applying existing development experience to new projects.

University Of
Massachusetts Chan
Medical School

M.D. Candidate

2015 - 2018

Won American College of
Physicians National
Abstract Competition
*Publications/Conference
Presentations:*

- Pretending to Be the Great Pretender. *ACP Impact*, October 2016.
- A Chemokine Protective Shield

Operations Manager (Boston MA)

2018 - 2020

Led operations transformation resulting in 500% revenue growth while maintaining 100% client retention through data-driven service improvements

- Managed 6-person team and implemented route optimization system that reduced service time by 40% and operational costs by 25%
- Leveraged Excel and Tableau to create comprehensive dashboards for KPI tracking and business intelligence, driving strategic decision-making
- Developed custom analytics tools to track team performance and route efficiency, leading to standardized best practices
- Applied operational optimization experience to enhance software architecture decisions in subsequent role as Web Developer, creating scalable solutions based on real-world business processes

Product Feedback Analyst

2021 - 2022

Dendron, Seattle WA (remote)

Built and maintained developer community resources that increased user adoption by 45% and reduced onboarding time by 30%

- Implemented structured feedback system using GitHub and Slack that led to 15+ key feature improvements and 80% faster bug resolution
- Developed comprehensive debugging protocols that reduced average issue resolution time from 3 days to 1 day
- Created technical documentation and tutorials for TypeScript/Node.js ecosystem, reaching 1000+ monthly active developers
- Contributed to core product features using TypeScript and Node.js until successful transition to maintenance phase

Clinical User Specialist

2014 - 2015

Vecna Healthcare, Burlington MA

Developed EMR user interfaces that reduced clinical documentation time by 35%, using Node.js, Bootstrap, and MySQL in Linux environments

- Spearheaded UI/UX improvements that increased user satisfaction by 40%, implementing responsive designs with JavaScript and Bootstrap while ensuring HIPAA, HITECH, and HITRUST compliance
- Reduced system deployment time by 60% through automation with Ansible, managing configuration and updates across 20+ Ubuntu/Debian clinical workstations
- Bridged technical and clinical teams through user research and testing, resulting in 90% user adoption rate and 25% decrease in support tickets
- Maintained 99.9% uptime for critical healthcare systems through proactive monitoring and infrastructure optimization

Research Assistant in Vaccine Immunology

2011 - 2013

Vaccine Immunotherapy Center, Massachusetts General Hospital, Boston MA

Performed groundbreaking transplant immunology research that achieved 40% longer graft survival through novel application of chemokine CXCL12, resulting in

for Islet Transplantation. *Digestive Disease Interventions*, Boston, MA.

Transferable Skills:

- Applied statistical analysis and diagnostic frameworks to complex problem-solving in software development
- Translated medical knowledge into algorithmic solutions, bridging domain expertise with technical implementation
- Leveraged systematic diagnostic approach to enhance software debugging and system architecture design

Tufts University

B.Sc. GPA: 3.7

2007 - 2010

Key Achievements:

- Graduated Magna Cum Laude with Thesis Honors
- Published research in Organic and Biomolecular Chemistry on glycosidation methodology [DOI: 10.1039/c2obo6883d]
- Completed advanced Capstone project in 3D Digital Design, focusing on

published findings in the prestigious American Journal of Transplantation

- Utilized Python to perform statistical analyses of data from in-vitro and microarray experiments, including SciPy for ANOVA and T-tests, Pandas to structure data, and Matplotlib to visualize data for presentation
- Programmed 'Cellbot', an automated cell counting program in Java and ImageJ, improving efficiency and accuracy of data collection, leading to a 25% improvement in data collection time. Communication and Presentation:
- Presented project, theory, and findings to both technical subject experts and general clinical audience at conferences including Massachusetts General Hospital Presentation Day and Digestive Disease Interventions.

Publication:

- Alginate encapsulant incorporating CXCL12 supports long term allo and xenotransplantation without systemic immune suppression. *American Journal of Transplantation*, 2015. [DOI 10.1111/ajt.13049](https://doi.org/10.1111/ajt.13049)



PROJECTS

Clinical Decision Support Tools

A collection of medical calculators and decision support tools:

- Built with JavaScript and Python
- Implemented evidence-based algorithms for clinical decision making
- Created intuitive user interfaces for healthcare providers
- HR7 and FHIR data integration for data interoperability with medical record systems
- Deployed as web applications for easy access



Query Builder

Built platform that enables data analysts and developers to execute custom queries and build analytics tools

- Supports PostgreSQL, MySQL, and MongoDB databases
- Created data visualizer for query results
- Reusable and customizable templates for time analysis, table statistics, and data quality queries



Tableau Cleaner

Built modern web application designed to clean and process Tableau data files efficiently

- Automated data extraction, cleaning, and transformation
- Created user-friendly interface with drag-and-drop functionality
- Export



computational
modeling

Technical Experience:

- Managed IT infrastructure as Computer Lab Administrator at Eliot-Pearson Children's School, later earning Red Hat Certified System Administrator (RHCSA) certification

Choate Rosemary Hall

American Invitational
Mathematics
Examination (AIME)
Qualifier

- Recognized for exceptional analytical skills and mathematical modeling, achieving top 5% performance in algorithmic challenges
- Demonstrated advanced problem-solving capabilities by completing complex optimization problems with consistent accuracy



Location-based social platform leveraging geofencing and real-time notifications, enabling contextual note-taking and message delivery based on users' physical locations

- Full-stack React/Node.js application with GraphQL subscriptions, Express.js, and MongoDB
- Implemented high-performance data architecture with geospatial indexing and real-time updates using MongoDB, REST, and GraphQL
- Built advanced search functionality with text and location-based querying
- Integrated Tiptap rich text editor with markdown support
- Secure JWT authentication with protected routes
- Responsive, mobile-first UI with modern design principles
- Deployed on Vercel with CI/CD pipeline
- In progress: Migration to React Native and TypeScript



SKILLS

Typescript/Javascript

LangChain

Python, Flask, Numpy, Scipy

GraphQL, RESTful web services

PostgreSQL, MySQL, MongoDB, Firebase/Supabase, SQL language

React, Nuxt, Vue

HTMX/HTML5/CSS3/Handlebars

AWS, EC2, DynamoDB, ElasticBeanstalk

Virtualbox, VMWare, Docker

Selenium, Autohotkey

Figma, Illustrator, Photoshop

Excel, Tableau

Git, Linux environments, Bash

Red Hat (Linux) Certified System Administrator (RHCSA) Certificate 170-077-016

Knowledge of- Azure, .NET, Java, Springboot, C