Jonathan Young

Software Engineer rooted in resilience and problem solving skills.

jyoung0696@gmail.com
iterating.github.io
github.com/iterating
US citizen

ABOUT ME

I'm a software engineer with over two years of experience in building web applications with technologies including TypeScript, Node.js, GraphQL, React, and LangChain. Previously in medicine, I found myself frequently combining domain knowledge with programming skills to build tools for myself and others, and so I switched careers to software development to focus on building my skills. I believe in taking the time to learn something well and apply it to any given task.

EXPERIENCE

Software Engineer (contract)
LA Film Lab and Studio, Los Angeles CA
2024 - Present

Responsible for building a component-driven architecture using TypeScript, Vue.js, and Node.js with Supabase, delivering mission-critical features that improved operational efficiency and customer engagement

- Developed API endpoints that retrieves and updates order information between Square's e-commerce SDK and Supabase database, processing batch transactions and real-time status tracking for customer orders
- Implemented a real-time event architecture with SSE and WebSockets, enabling instant order updates across all platforms
- Developed optimized kiosks for order entry that reduced in-person order times by 25% and reduced manual errors
- Created database migration tools and stored procedures with Javascript and SQL, leading to successful database migration
- R&D tested deployments on Netlify and Heroku cloud services

Web Developer (contract)
Greater Boston Snow Removal, Boston MA (Hybrid Remote)
2022 - 2024

Developed business services platform that transformed company into Boston's market leader, growing from 4 to 80+ employees through coordinated dispatch and real-time communications

- Implemented 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 and increasing worker efficiency by 40%
- Implemented SMS management functionality with Twilio SDK, allowing for efficient dispatch and updates
- Deployed system on AWS with ElasticBeanstalk running EC2 instances, maintaining high availability and scalability

Clinical User Specialist Intern
Vecna Healthcare, Burlington MA
2014 - 2015

- Contributed UI/UX improvements to EMR frontend that reduced clinical documentation time by 30%
- Reduced system deployment time by 60% through automation with Ansible, managing configuration and updates across 20+ Ubuntu/Debian clinical workstations

Research Assistant in Vaccine Immunology
Vaccine Immunotherapy Center, Massachusetts General Hospital, Boston MA
2011 - 2013

Performed cutting-edge transplant immunology research that increased survival through novel application of chemokine CXCL12, resulting in published findings in the prestigious American Journal of Transplantation

EDUCATION

Per Scholas
Software Engineering Track, GPA: 4.0

Completed intensive training in enterprise software development practices and Agile methodologies, achieving top performance (4.0 GPA)

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

Tufts University
B.Sc. GPA: 3.7
2007 - 2010

Graduated Magna Cum Laude with Thesis Honors

- Published research in Organic and Biomolecular Chemistry on glycosidation automation
- Managed IT infrastructure as Computer Lab Administrator at Eliot-Pearson Children's School, later earning

- Programmed 'Cellbot', an automated cell counting program in Java and ImageJ, improving efficiency and accuracy of data collection Publication:
- Alginate encapsulant incorporating CXCL12 supports long term allo and xenoislet transplantation without systemic immune suppression. *American Journal of Transplantation*, 2015. DOI 10.1111/ajt.13049

PROJECTS

Query Builder

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

- Built RESTful APIs for efficient data retrieval and processing from PostGreSQL, MySQL, and MongoDB databases
- Implemented data validation and error handling for robust data processing
- Built reusable and customizable templates for time analysis, table statistics, and data quality queries

Clinical Decision Support Tools

A collection of medical calculators and decision support tools:

- Implemented evidence-based algorithms for clinical decision making in Python and Node.js
- Implemented HR7 and FHIR data integration for data interoperability with medical record systems

Placenotes

Location-based social platform enabling contextual note-taking and message delivery based on users' physical locations

- Engineered a high-performance data architecture with geospatial indexing and real-time updates using MongoDB, REST, and GraphQL
- Implemented end-to-end JWT authentication across React frontend, Express.js middleware, and API endpoints, allowing secure user access
- Implemented state management with Redux, ensuring smooth user experience and data consistency

SKILLS

Typescript/Javascript

Python, Flask, Numpy, Scipy

GraphQL, RESTful web services

SQL, MongoDB, Firebase/Supabase

React, Nuxt, Vue

AWS, EC2, DynamoDB, ElasticBeanstalk

Git, Linux environments, Bash

Red Hat (Linux) Certified System Administrator (RHCSA)

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