

# Nickolas Piraino

Open To Relocation

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## Experience

### **Lead Software Engineer - BigLab, Florida State University**

June 2021 - December 2023

- Engineered a MongoDB pipeline to import, query, and parse **4M+** documents, cutting data processing time by **55%** and enabling scalable backend operations.
- Boosted web application performance by **50%** by optimizing PHP data retrieval and minimizing page load times, enhancing user experience.
- Developed and deployed multiple search engines, increasing query result accuracy by **70%** using PHP and MongoDB, enabling faster access to medical research data.
- Designed a scalable schema and processing workflow for a large dataset, leveraging Python multithreading/multiprocessing to accelerate throughput by **8x**.
- Built custom AWS AMIs for machine learning reducing deployment time by **40%** and improving maintainability.

### **Systems Engineer - Systems Group, Florida State University**

July 2018 - December 2021

- Provided technical support to **300+** students and faculty, resolving IT issues both in-person and remotely to ensure minimal downtime and user satisfaction.
- Maintained and repaired **20+** departmental printers, scanners, and copiers, reducing device service interruptions by **40%**.
- Managed toner inventory and backup systems, streamlining device maintenance and improving disaster recovery response times.
- Installed and configured CentOS 7-based DNS, DHCP, and web servers, enhancing lab network reliability.
- Setup and maintained over **50** lab workstations, including custom CAT5e cable fabrication and software provisioning, reducing setup time by **100%**.

## Projects

### **Movie Recommendation - [Github Repo](#)**

Technologies: Next.js, Spring Boot, Nginx, MongoDB, Tailwind CSS, Vercel

Full-stack movie analytics application with a Next.js frontend and a Spring Boot backend, designed for responsive, animated and intuitive user interaction.

- Self-hosted the Spring Boot API on a Rocky Linux PC, reverse-proxied through Nginx, and assigned a public-facing subdomain: [spring-movie.duckdns.org](http://spring-movie.duckdns.org). Connected backend to a locally-hosted MongoDB instance, while optionally supporting MongoDB Atlas for broader accessibility. Deployed the frontend to Vercel, [movies-spring-nextjs.vercel.app](http://movies-spring-nextjs.vercel.app). Which communicates securely with the database via RESTful APIs.

### **JWT-Auth - [Github Repo](#)**

Technologies: Next.js, Spring Boot, Nginx, Postgresql, Tailwind CSS, Vercel

A full-stack template POS system that utilizes Spring Security to create JWT Authentication for login and register.

- Self-hosted the Spring Boot API on a Rocky Linux mini PC, reverse-proxied through Nginx, and assigned a public-facing subdomain: [jwt-auth.duckdns.org](http://jwt-auth.duckdns.org). The SpringBoot API is connected to a locally-hosted Postgresql instance. Vercel hosts the Nextjs frontend, [jwt-auth-olive.vercel.app](http://jwt-auth-olive.vercel.app).

## Technical Skills

- Languages & Frameworks:** Javascript, Java, React, Next.js, Spring Boot
- Databases & Cloud:** Mongodb, SQL, AWS, Docker
- Tools & DevOps:** Git, RESTful APIs, CI/CD, Nginx

## Education

**B.S. in Computer Science** - Florida State University

## Publications

"[COVIDKG.ORG - a Web-scale COVID-19 Interactive, Trustworthy Knowledge Graph, Constructed...](#)", authored in EDBT, 2023

"[Hybrid Metadata Classification in Large-scale Structured Data sets](#)", in the journal of Data Intelligence, Rinton Press, Special Issue on "Best of DEXA", 2021