Alec Patterson

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EDUCATION

University of Florida, College of Liberal Arts and Sciences   Gainesville, FL

Bachelor of Science in Computer Science **GPA: 3.95**   Dec 2024

Relevant Courses: Software Engineering, Data Structures and Algorithms, Operating Systems, Computer Organization, Algorithm Abstraction and Design, Advanced Programming Fundamentals, Information and Database Management Systems, Enterprise Software Engineering Practices, Information Security, Data Science

SKILLS

Languages/Frameworks: Java (OOP), Python, JavaScript (React/Node), GraphQL, SQL (Oracle/PostgreSQL), C++, R, HTML/CSS, TypeScript

Cloud & DevOps: Linux, AWS (EC2), Oracle OCI, Supabase, MongoDB Atlas, Vercel, Docker

Developer Tools: Git, Jira, Visual Studio, VS Code, IntelliJ, Jupyter Notebook, Postman, Vite, Quasar

EXPERIENCE

Data Migration Specialist: Implementation Services   Jan 2020 – Present

Enumerate (formerly TOPS Software)   *Clearwater, FL (Remote)*

- Developed & deployed a **Python automation tool** that cut manual data validation time by 50%.
- Reduced file transfer size by up to 90% through a **custom JavaScript filter**, accelerating enterprise data migration.
- Collaborated with engineers to refine the "New Community Setup Wizard," leveraging data migration expertise to define column mappings, prevent common pitfalls, and ensure an intuitive user experience
- Accelerated data-migration workflows by standardizing procedures and removing non-essential steps, reducing time-to-value from 90 days to 60 days.

Project Manager: Customer Onboarding   Nov 2017 – Dec 2019

TOPS Software   *Clearwater, FL (On-Site)*

- Coordinated 3–10 customer onboarding projects/month, migrating clients from a legacy desktop application to a new SaaS platform.
- Streamlined communication between product, engineering, and client stakeholders for timely, high-quality launches.

Customer Support Specialist   Oct 2013 – Oct 2017

TOPS Software   *Clearwater, FL (On-Site)*

- Resolved 5–20 customer support tickets daily, consistently performing as a top-tier service provider.
- Conducted advanced troubleshooting for software issues and partnered with engineering to document and fix bugs, **streamlining product feedback loops**.
- Collaborated with internal teams to **translate user pain points** into actionable improvements, enhancing overall customer satisfaction.

SELECT PROJECTS

Portfolio Website | *Next.js, Tailwind CSS, Three.js, Framer Motion*   Feb 2025

- Designed and built a responsive, interactive portfolio website at **alecbytes.com**, highlighting projects and technical skills with intuitive UI and engaging animations.
- Integrated an interactive **GPT-powered chatbot** using RAG techniques, allowing visitors to dynamically inquire about professional details, significantly enhancing user engagement.
- Leveraged **generative AI** to create and texture personalized 3D assets from photos, enriching the site's visual appeal and interactivity.

- AlecBytes.com | github.com/AlecBytes/portfolio

RAG Chatbot | *Next.js, Python, OpenAI API, PostgreSQL, DrizzleORM* Mar 2025
- Wrote **Python** scripts to convert personal information from YAML files into vector embeddings using the **OpenAI API**, enabling accurate retrieval-augmented responses.
- Customized chatbot interactions by **fine-tuning prompts** and continuously updating embeddings, improving the chatbot's performance and responsiveness.
- Enhanced user experience with smooth real-time streaming interactions utilizing Vercel AI SDK and Framer Motion animations.
- AlecBytes/chatbot | github.com/AlecBytes/rag-chatbot-alec

ML Prediction of Song Genre and Popularity | *Python, Jupyter, PyTorch, scikit-learn* May 2023 – Jul 2023
- Performed exploratory data analysis on a Spotify dataset, identifying correlations between audio features and song popularity.
- Engineered and preprocessed features using **pandas**, applying dimensionality reduction to optimize model performance.
- Developed and benchmarked **Random Forest** and **Neural Network** models for genre and popularity classification, outperforming baseline decision trees.

ChainLink: Social App for Cyclists | *React, JavaScript, Node.js, MongoDB, AWS* Sep 2024 – Dec 2024
- Led security enhancements and new features (friend system, ride sharing, password reset flow).
- Collaborated with a 3-person dev team to move the prototype toward production readiness, leveraging **AWS** for deployment.
- chainlink.connexx-ai.com | github.com/LearnDialogue/connexx-chainlink

PantryPal: Food Donation Platform | *Vue.js, Node.js, PostgreSQL, Supabase Auth, Vercel* Aug 2023 – Dec 2023
- Engineered a **dynamic feed & notification system** connecting restaurants' surplus food with local charities.
- Led a 3-person team, focusing on secure architecture, efficient data flow, and **real-time concurrency**.
- pantrypal-lac.vercel.app | github.com/AlecBytes/PantryPal

Data Trends & Visualizations Website | *SQL, Vue.js, Node.js, Oracle Cloud* Aug 2023 – Dec 2023
- Authored optimized **SQL queries** to uncover key data trends in baseball statistics.
- Developed a secure Node.js API and front-end visuals in Vue.js, achieving **seamless cloud-hosted** data access.
- Five interactive visualizations of baseball statistical data, hosted on Oracle Cloud with an Autonomous SQL Database.
- REST API for querying and fetching data with SQL.
- baseballdatatrends.com | github.com/AlecBytes/dbProject