Lakelon Bailey

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EDUCATION

University of Tennessee, Knoxville
BS in Computer Science
Minor in Mathematics
Graduation: May 2025
Dean's List: Fall 2022 through Spring 2024

Vanderbilt University
Full-Stack Web Development Bootcamp
Graduated September 2022
Grade: A

COURSEWORK

Data Structures and Algorithms
Systems Programming
Algorithm Analysis/Automata
Linear Algebra
Numerical Algorithms/Scientific Computing
Multivariate Calculus
Differential Equations

SKILLS

Programming Languages
C/C++, JavaScript/Node.js, Python, Java, HTML, SQL, CSS

Tools and Frameworks

NodeJS	Digital Ocean
Docker	AWS S3
Express	MySQL
Django	MongoDB
React	PostgreSQL
Vue	Spring Framework
Unix	Linux

Soft Skills
Communication, Leadership, Project Management, Adaptivity, Teaching, Self-starting, Written communication, Teamwork, Agile Methodology, Client Communication

PROJECTS

lakelon.dev: Personal software infrastructure powered by Docker and Raspberry Pi.
FragranceFinder: Web application that scrapes and displays data from over 10 different fragrance sites.
Memebook: Meme social media that allows users to create/like/comment memes and interact with friends.
lakelonbailey.com: React app that demonstrates my frontend capability while providing a detailed display of my skills and experience.

WORK EXPERIENCE

Data Software Engineer Co-op, IBM **August 2023 – Present**

- Learning and implementing machine learning techniques to train models that accurately predict the computer hardware and software needs of new employees based on historical device usage trends.
- Leading the introduction of IBM's Carrot Framework to the Devices Data Insights team, resulting in productivity enhancements and improved codebase structure for data pipelines and reporting.
- Designed and implemented a robust pipeline to rapidly transport 4,000,000+ records from 10+ critical tables from ServiceNow to IBM Cloud Object Storage. This pipeline is now used at the production level as a foundation for several crucial internal data insights and reporting processes.

Software Engineer, ACTprep.com, Inc. **May 2022 – Present**

- Leading the development and maintenance of the ACTprep.com software infrastructure: a Docker-powered network of web applications and APIs designed to receive and process all company data for coaching, analytics, student progress monitoring, and more. Over 150 students, parents, and employees depend on these applications.
- Consistently decreasing company costs through automation, having reduced annual labor/supplies costs by over $50,000 and increased the total number of students an individual coach can mentor by over 100%.
- Designing a Docker-powered microservices app network to improve scalability and accelerate development processes.
- Worked side-by-side with the President of ACTprep.com to fully migrate all ACTprep.com internal processes and data management over to a web application developed from scratch in six months.
- Successfully interviewed, hired, and trained a Software Engineering Intern.

Technical Lead, Hack4Impact UTK Chapter **August 2023 – Present**

- Leading a team of five student software developers in the creation of a map-based data visualization software designed to provide insights to United Way of Greater Knoxville (UWGK) on where to direct funding/grants based on community support demographics.
- Holding periodic meetings with UWGK stakeholders to ensure that the project is following their guidelines and expectations.
- Held weekly programming workshops focused on a Next.js stack based on the MERN stack (MongoDB, Express, React, Node). These workshops prepared my team to develop software efficiently and professionally for UWGK.

Full-Stack Software Engineer Intern, IBM **May 2023 – August 2023**

- Contributed to the strategic re-architecture of a global Vue.js/Spring Boot application that facilitates over 315k users, including all IBM employees.
- Refined and implemented modern authentication and authorization mechanisms, significantly improving system security and user experience by ensuring the right access controls for various user roles.
- Re-organized and optimized data retrieval, leading to a 68% reduction in on-page-load API calls.