Efstratios Koulouris

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Emerging Computer Science professional with a strong foundation in software development, data structures, and system design. Experienced in applying academic knowledge to real-world problem-solving through hands-on projects and collaborative teamwork. Recognized for a results-oriented mindset, adaptability, and commitment to continuous learning in dynamic technical environments.

Education

Indiana University – Bachelor of Computer Science

Academic Honors: Dean's List Fall 2022, 2023

Relevant Coursework: Database Concepts, Software Engineering for Info Systems, Data Structures & Algorithms, Computer Structures, Object-Oriented Software Methods, Distributed Systems

Professional Experience

Bitwise Global Inc. Internship

Schaumburg , Illinois

Backend Developer

June 2024 - August 2024

- Developed and maintained backend APIs using Java, Spring Boot, and MySQL, supporting scalable structures that handled 100+ daily requests.
- Designed and implemented Data Transfer Objects (DTOs) and Entity classes to ensure data integrity and reliability across services.
- Tested APIs with Postman and JUnit, achieving 95% code coverage and identifying/resolving 20+ bugs to improve system stability.

Indiana University Luddy School of Informatics, Computing, and Engineering

Bloomington, Indiana

January 2024 - May 2024

System Programming with C and Unix Teacher's Assistant

- Graded assignments, quizzes, and exams for 75+ students, providing detailed feedback to enhance learning outcomes.
- Held weekly office hours supporting 10-15 students per session with additional guidance and troubleshooting.
- Led lab sessions addressing students' questions, clarifying complex concepts (e.g., memory management, Unix processes), and aiding with course material, contributing to a 15% improvement in average class performance.

Projects

Full-Stack Data Visualization, Developer, Bloomington, Indiana

March 2025 - May 2025

- Developed a full-stack interactive dashboard using Python, Dash, and Plotly to compare Cristiano Ronaldo's and Lionel Messi's career goals per season, integrating real-world sports data from APIs.
- Implemented distributed systems principles for dynamic data handling, resulting in a responsive app capable of processing and visualizing large datasets with low latency (reduced query times by ~30% through optimized caching).
- Overcame challenges in real-time data integration by using RESTful APIs and asynchronous processing, demonstrating scalability for user-driven queries.

Guitar Inventory, Developer, Bloomington, Indiana

January 2024 - April 2024

- Built a dynamic web application with a user-friendly interface using HTML, CSS, JavaScript, and React for frontend, allowing users to input and manage guitar details (brand, model, year, price).
- Developed RESTful APIs in Java to facilitate seamless data exchange between frontend and backend, incorporating validation to handle up to 1,000+ inventory items efficiently.
- Integrated a PostgreSQL database for persistent storage, improving data retrieval speed by implementing indexing, which enhanced overall app performance.

Coffee Order, Developer, Bloomington, Indiana

January 2024 - April 2024

- Designed an intuitive user interface with JavaScript and React, enabling customization of drink selections with various coffee types and condiments for an enhanced user experience.
- Built robust RESTful APIs in Java to manage client-server interactions, including input validation and database transactions using MySQL, supporting high-reliability for order processing.
- Addressed scalability issues by incorporating design patterns like the Decorator pattern for condiments, allowing flexible expansions and reducing code redundancy by 25%.

Skills

Programming Languages: Java, C, JavaScript, SQL

Development Tools & Frameworks: Visual Studio Code, IntelliJ IDEA, Postman, Kubernetes, Flask, React

Databases & Cloud: MySQL, PostgreSQL, AWS **Data Visualization & Others:** Plotly, Dash