Abhinav Krishniah

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EDUCATION

University of South Carolina — Columbia, SC
Bachelor of Science in Computer Science, Minor in Mathematics — *Aug. 2022 – May 2026*
Cumulative GPA: 3.96/4.00 — Dean's List, Capstone Scholar

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Artificial Intelligence, Computer Architecture, Linear Algebra

CIEE Kyoto — Kyoto, Japan
Study Abroad Program — *Jan. 2025 – May 2025*

TEACHING EXPERIENCE

Supplemental Instruction Leader — Aug. 2025 – Present
University of South Carolina — *Columbia, SC*

- Led 3 weekly review sessions for 160+ students, designing Java-based problem sets on data structures (linked lists, stacks, queues, heaps) that boosted average exam scores by 20%.
- Created interactive study materials and coding exercises in Java, helping reduce course withdrawal rates by 10% in a high drop/fail class.
- Collaborated with faculty to align sessions with coursework, enhancing student retention and engagement through structured learning support.

ACADEMIC EXPERIENCE

Senior Capstone Project (Course Requirement) — Aug. 2025 – Present
University of South Carolina — *Columbia, SC*

- Led a 5-member team to develop a full-stack health-tracking web application using Next.js, Node.js (Express), TypeScript, and Supabase within an Agile workflow.
- Designed a scalable backend with PostgreSQL and Supabase Auth and implemented CI/CD pipelines on Vercel to automate testing and deployment.

Software Engineering Practicum (Course-Based Project) — Jan. 2024 – May 2024
University of South Carolina — *Columbia, SC*

- Collaborated on a team of 5 to complete a full SDLC-based software project using SCRUM, delivering a client-approved system.
- Developed system architecture using UML and implemented version control, design patterns, and JUnit testing to ensure reliability and maintainability.

PROJECTS

Code Canvas | *Next.js, TypeScript, Node.js, Socket.IO, Supabase (PostgreSQL/Auth)* — June 2025 – Aug. 2025

- Built a real-time collaborative coding platform with multi-language support (Python, Java, C++) using Next.js, Node.js, and Socket.IO, featuring syntax highlighting and IDE-like functionality.
- Implemented secure authentication and data management with Supabase (PostgreSQL/JWT) and optimized for scalability and responsiveness, delivering seamless performance across devices.

Legendary Pokemon Classifier | *Python, pandas, NumPy, Matplotlib, scikit-learn* — Jan. 2025 – Feb. 2025

- Built an end-to-end machine learning pipeline with scikit-learn, SMOTE, and ColumnTransformer for data preprocessing and class balancing, improving model generalization.
- Trained and evaluated ensemble models (RandomForest, AdaBoost, GradientBoosting), achieving a 97% F1-score on test data, demonstrating strong predictive performance and data handling skills.

TECHNICAL SKILLS

Languages: Java, Python, C++, TypeScript, R, HTML/CSS
Frameworks: React, Next.js, Node.js, Express.js, Tailwind CSS, Godot
Developer Tools & Practices: Git, SCRUM/Agile, JUnit, Design Patterns, VS Code, Cursor, Eclipse, Linux
Databases & Libraries: pandas, NumPy, Matplotlib, PostgreSQL, Supabase