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 and Algorithms, Operating Systems, Software Engineering, Computer Architecture, Computer Networks, Artificial Intelligence, Linear Algebra, Vector Calculus

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

Experience

Software Engineering Capstone Project — Aug. 2025 – Present
University of South Carolina — *Columbia, SC*

- Led a **5-member team** to design and build a **full-stack health-tracking web app** using Next.js, Node.js (Express), TypeScript, and Supabase, following **Agile** principles.
- Developed a **scalable backend** architecture with **PostgreSQL**, and **Supabase Auth**, ensuring reliable data management and maintainable code structure.
- Implemented **CI/CD pipelines** on **Vercel** to automate builds, testing, and deployments, increasing development efficiency by **25%** and ensuring consistent release quality.

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.

Software Engineer Intern — Jan. 2024 – May 2024
University of South Carolina — *Columbia, SC*

- Assisted a team of 5 through the full **Software Development Lifecycle (SDLC)** using **SCRUM methodologies**, achieving **100% on-time delivery** of a client-approved software product.
- Designed and implemented **UML diagrams** to define system architecture, which improved team alignment and contributed to a **25% reduction in rework** during development.
- Managed task coordination and version control with **Git**, applying **design patterns** and **JUnit testing** to build a robust, scalable solution with a **95% test pass rate**.

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, 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