AKSHARA KOLIPAKA

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EDUCATION

University of North Carolina at Chapel Hill   **May 2027**

Bachelor of Science in Computer Science | Bachelor of Science in Statistics and Analytics | GPA: 3.7

Relevant Coursework: Data Structures and Algorithms, Algorithms and Analysis, Systems Fundamentals, Computer Organization, Foundations of Software Engineering, Foundations of Programming, Probability for Data Science, Methods of Data Analysis, Mentored Research in Computer Science, Computational Photography, Modern Web Programming, Web Design and Development

TECHNICAL SKILLS

Languages: Python, Java, React, SQL, Swift, JavaScript, TypeScript, C, C#, C++, HTML/CSS, R, Go, Kotlin
Frameworks: SwiftUI, UIKit, Next.js, Qt, Three.js, Flask, FastAPI, Node.js
Libraries: TensorFlow, PyTorch, D3.js, OpenAI API, REST APIs, Beautiful Soup
Cloud and Developer Tools: Git, Docker, AWS, Google Cloud Platform, Xcode, VS Code, Visual Studio, IntelliJ, Eclipse, Processing, Figma

EXPERIENCE

Undergraduate Researcher   **August 2025 – Present**

Society-Centered AI Lab — Mentor: Dr. Neil Gaikwad   *Chapel Hill, NC*
- Engineered a full-stack AI research infrastructure (React, Node.js, MongoDB) supporting large-scale analysis of LLMs' cross-cultural ethical reasoning in human rights reports.
- Developed an interactive geospatial visualization system integrating 20+ years of UN human rights data across 180+ countries with real-time LLM inference outputs, enabling dynamic moral comparison across LLM models.
- Architected a platform for collaborative analysis of AI policy, built the entire front end from scratch using modular React and Next.js components, integrated secure user authentication, optimized database schemas, and a containerized CI/CD pipeline to support scalable deployment and experimentation.

Infy Tech Pioneer   **June 2024 – August 2025**

Infosys Mentorship Program   *Cary, NC*
- Built The Money Engine, a generative AI–driven financial advisory system integrating OpenAI's language models with secure client data pipelines.
- Designed and implemented a full-stack architecture, React front-end, Flask/Python back-end supporting conversational interfaces, RESTful APIs, and automated data synchronization with third-party financial sources.
- Developed intelligent front-end dashboards with real-time state management and AI-assisted portfolio analytics, improving insight retrieval speeds by 35%.

PROJECTS

FLUNC | UNC Track Winner at HACKNC Hackathon   *November 2024*
- Architected a full-stack financial literacy platform for 30,000+ UNC students featuring a loan calculator with amortization schedules, AI-powered chatbot advisor, curated resource library, and a price comparison engine saving users an average of $200/month.
- Implemented a responsive front-end using HTML5, CSS3, and JavaScript with a Flask back-end, integrating the OpenAI API for conversational AI and BeautifulSoup for large-scale web scraping across 10+ e-commerce platforms.

Pixel Pets | Winner at CLT Hack Hackathon   *April 2024*
- Programmed a gamified productivity platform that matches students with virtual pets through personalized chatbot interactions, supporting automated task management, assignment tracking, and Pomodoro-based focus sessions.
- Built a responsive React.js application with custom state-managed components, dynamic UI animations, and hand-drawn pixel art assets designed in Figma.

Space Guardians | 1st Place Winner at AxeHacks Hackathon   *March 2024*
- Designed and developed a multiplayer space racing and battle game with real-time physics, sprite-based animation, and keyboard-driven player controls.Implemented object-oriented architecture with modular game state management for scalable multiplayer interactions.

The Space Economy Hunger Games | Business Track Winner at Carolina Data Challenge 2025   *September 2025*
- Engineered a RShiny website, implementing R and Python ETL pipelines to process multi-dimensional economic datasets and generate automated statistical visualizations for employment, funding, and GDP forecasting across 12+ space industry sectors.

CAMPUS INVOLVEMENT

Front End Engineer   **January 2025 – Present**

CS for Social Good   *Chapel Hill, NC*
- Engineered a cross-platform React Native mobile application for the Breast Cancer Hub Organization, delivering early detection tools, self-exam reminders, and educational resources to improve screening accessibility for 1,000+ users in underserved regions.
- Optimized UI rendering performance through lazy loading, reusable component design, and asynchronous API integration, achieving fluid user interactions and consistent responsiveness across iOS and Android.

Web Developer & UI/UX Designer   **August 2023 – Present**

Girls Who Code   *Chapel Hill, NC*
- Designed and developed a responsive website for the UNC Chapel Hill chapter using HTML, CSS, and JavaScript, applying performance-optimized layouts and scalable component architecture aligned with modern design systems.
- Prototyped and refined user interfaces in Figma, implementing WCAG-compliant accessibility standards and adaptive design patterns to enhance usability and inclusivity across screen sizes.