

Kori Russell

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EDUCATION

University Of Alabama

Bachelor of Science in Computer Science

- **Relevant coursework:** Software Design and Engineering, Data Structures and Algorithms, Web Development, Statistics with R, Distributed Systems

Tuscaloosa, AL

Aug. 2023 – Dec 2026

University College London

Summer Study Abroad Program

London, UK

Jun. 2024 – Aug 2024

EXPERIENCE

Undergraduate Research Assistant - Web GIS Development

April 2025 – Present

Department of Geography, The University of Alabama

Tuscaloosa, AL

- Architected **automated geospatial analysis pipelines** processing **3,143 U.S. counties** using Python and GeoPandas, reducing manual analysis time by **99%** through Google Maps & OpenStreetMap API integration.
- Developed **scalable data extraction workflows** processing **100GB+ of geospatial datasets**, improving research methodology efficiency by **75%** for urban landscape analysis and contributing to peer-reviewed GIS publication.

Web Development & Event Tech Intern

June 2022 – January 2023

Ultra Music Festival

Seoul, South Korea

- Redesigned **artist logistics platform UI/UX** using React, improving mobile responsiveness by **60%** and reducing navigation time by **40%** while supporting **10+ performing artists** with 99.5% uptime during critical performance windows.

Cybersecurity Intern

January 2022 – June 2022

U.S. Department of Defense – Air Force (51st Communications Squadron)

Osan Air Base, South Korea

- Monitored **secure network operations** covering **3,000+ military personnel**, maintaining 99.9% network uptime through proactive incident response and real-time threat detection.
- Configured **enterprise Cisco router infrastructure** and managed encrypted communications, supporting base-wide wireless deployment serving **1,500+ concurrent users**.

PROJECTS

Distributed Real-Time Chat System | *Java, WebSockets, Maven, HTML/CSS/JavaScript, JSON*

- Engineered **scalable distributed messaging architecture** supporting **multiple concurrent server nodes** with intelligent peer-to-peer message routing and loop prevention algorithms.
- Implemented **concurrent WebSocket server** handling **50+ simultaneous client connections** using Java threading pools and ConcurrentHashMap for thread-safe operations.
- Designed **custom JSON message protocol** with origin tracking and built responsive web client interface with real-time message display and fault-tolerant networking across distributed nodes.

Money Trees (1st Place Winner – UA Innovate Hackathon) | *Next.js, JavaScript, Tailwind CSS, Flask, OpenAI API*

- Won **1st Place in Fintech Category** at UA Innovate Hackathon by delivering a **complete AI-powered banking MVP** within 22 hours, competing against **50+ teams**.
- Led **full-stack development** of gamified savings tracker using React/Next.js frontend integrated with Python/Flask backend and OpenAI API for personalized financial coaching.
- Coordinated **4-person development team** through agile methodologies, delivering 5 core features and achieving **95% positive user feedback** during demonstrations.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C++, R, HTML5, CSS, SQL

Frameworks & Technologies: Spring Boot, React.js, Next.js, Express.js, Node.js, Flask, Django, WebSockets, Maven

Libraries & APIs: OpenLayers, Tailwind CSS, OpenAI API, Google Maps API, GeoPandas, JSON

Developer Tools: NeoVim, Git, GitHub, VS Code, Docker, IntelliJ IDEA

Specialized Skills: Distributed Systems, Network Programming, Concurrent Programming, Real-time Communications, GIS Analysis, Agile Development, CI/CD