

SALEM BAGNIED

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EDUCATION

University of Virginia, B.A. Computer Science

Aug 2022 — May 2026

- Minor: Technology Entrepreneurship (McIntire)

EXPERIENCE

Research Assistant – Omni-Reality & Cognition Lab, University of Virginia

Oct 2025 – Present

- Developed VR/AR experimental systems using Unity, Arduino, wearable sensors, and physiological data pipelines.
- Built real-time scripts to synchronize device input and multimodal physiological data for behavioral and cognitive research.

Software Developer – Medical Research Group (Caretaker Medical Partner)

Mar 2025 – Present

- Sole developer of a React Native wellness app for medical research: Bluetooth device integration, CSV parsing, real-time HRV/vital sign analytics, guided breathing, and AI-driven insights.

Academic Ambassador – University of Virginia

Jul 2024 – Present

- Provided mentorship and peer advising in Computer Science and McIntire pathways while coordinating with deans, faculty, and partner offices.

Recreation Advisory Board – University of Virginia Recreation

May 2024 – Present

- Supervised 50+ student employees and advised on facility operations, policy development, and student recreation initiatives.

PROJECTS

Medical Wellness App | React Native, JavaScript, Bluetooth, AI

- Mobile app for medical research integrating cardiovascular monitoring devices.
- Implemented HRV metrics, CSV parsing, real-time vitals visualization, guided breathing, and AI-driven analytics.

Course Review System | Java, JavaFX, Hibernate, SQLite

- Full-stack desktop app for UVA course reviews with login, CRUD reviews, and persistent storage.

OnScene | Whisper AI, PyTorch, Flask, Expo SDK

- Built an AI-powered EMT documentation platform using OpenAI Whisper for speech-to-text, reducing report time by 95%.
- Implemented real-time transcription, mobile data entry, and backend processing with Flask and PyTorch.

GroundsGo Transit | React Native, JavaScript, Expo SDK, Maps API

- Built a real-time transit tracker integrating UVA and Charlottesville buses.
- Developed AI-powered trip planning and unified mapping of campus/city lines.

SKILLS

Languages: Python, Java, R, HTML, CSS, JavaScript

Frameworks & Libraries: React Native, Expo CLI, Node.js, PyTorch, Flask, Hugging Face

Tools & Technologies: Git, GitHub, Docker, Firebase, SQLite, JSON, Gradle

AI/ML: OpenAI Whisper, Deep Learning, Speech Recognition, NLP

Environments: Linux, VSC, IntelliJ, PyCharm