Gordon Stein

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SUMMARY

Postdoctoral Scholar in Computer Science specializing in human-centered applications of AI, educational technology, and full-stack development. Developed web-based applications using JavaScript/TypeScript, HTML, CSS, AWS, and modern frameworks. Eager to apply expertise in AI integration and collaborative design to enhance accessibility and user experience.

EXPERIENCE

VANDERBILT UNIVERSITY | Postdoctoral Scholar
May 2024 - Present | Nashville, TN

- **Project: AI-Powered Interview Platform**
  - Built a full-stack platform using TypeScript, Svelte, Postgres, and Vercel to automate qualitative interview process
  - Led the IRB approval process, ensuring ethical design and responsible data management for student participants
- **Project: Custom Language Models for Education**
  - Trained and fine-tuned custom language models from scratch using PyTorch and Unsloth for applications in K-12 education
  - Designed pipeline for dataset cleaning to ensure appropriate content
- **Project: AI Ethics Educational Game**
  - Designed and developed an educational game to teach machine learning and AI ethics to elementary school students
  - Built browser-based interface to simplify training transfer learning models for image classification
  - Collaborated with team members through Git with CI/CD through GitHub Actions and deployment to AWS
- Developed an agent-based AI assistant system within a block-based programming environment to provide real-time coding support
- Designed and implemented block-based interfaces for gesture recognition, making complex ML techniques accessible to K-12 students
- Created Max/MSP patchers and C# components for OSC-based control of CAVE VR audio system from Unity-based applications

VANDERBILT UNIVERSITY | Research Assistant
May 2018 - May 2024 | Nashville, TN

- **Project: Educational Robotics Simulator (Ph.D. Dissertation)**
  - Architected a novice-friendly, networked robotics simulation, with work published in *Education Sciences* and *Frontiers in Computer Science* journals
  - Engineered the networked simulation server and API in Rust and deployed it to the web with a WebAssembly-based client
- **Project: NetsBlox Cloud Platform Services**
  - Contributed to "Code to Joy," an NSF VITAL Prize Challenge finalist
  - Engineered new microservices for the NetsBlox platform using Node.js, extending its capabilities for IoT and education
  - Integrated third-party hardware, including Anki Vector and ESP32-based robots, into the cloud environment
- Prototyped an mixed reality robotics platform, combining physical robots with virtual environments to create novel learning experiences

LAWRENCE TECHNOLOGICAL UNIVERSITY | Senior Lecturer
Aug 2016 – May 2018 | Southfield, MI

- Authored and taught university-level courses on emerging technologies, including Virtual Reality with Unity and Cybersecurity
- Mentored and advised multiple senior-level student projects from concept to completion

EDUCATION

VANDERBILT UNIVERSITY
Doctor of Philosophy
in Computer Science
May 2024 | Nashville, TN
Thesis: A Novice-Friendly Networked Educational Robotics Simulation

LAWRENCE TECHNOLOGICAL UNIVERSITY
Master of Science and
Bachelor of Science
in Computer Science
May 2016 | Southfield, MI
GPA: 3.9 / 4.0
Minor in Physics

SKILLS

PROGRAMMING

C • C# • JavaScript/Node.js • Python • Rust • C++ • Java • PHP • SQL • TypeScript • HTML5

TECHNOLOGY

AI/ML • Arduino • AR / VR / MR • AWS • CSS • Docker • Git / GitHub • LangChain • Large Language Models • Linux • MongoDB • MySQL • NoSQL • OpenCV • OpenAI API • PyTorch • Prompt Engineering • React • SQLite • Svelte / SvelteKit • TeX • Unity

SOCIETIES

Association for Computing Machinery (ACM)

Institute of Electrical and Electronics Engineers (IEEE)

IEEE Computer Society

LINKS

https://github.com/gsteinLTU/

https://www.linkedin.com/in/gordon-stein/