

SARAH DICKERSON

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EDUCATION

The University of Texas at Austin	Bachelor of Science, Electrical and Computer Engineering Minor: Business Fundamentals GPA: 3.8	May 2024
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WORK EXPERIENCE

American Airlines <i>Associate Software Engineer</i> ; Dallas, TX	Jun 2024 - Present
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- Modernized legacy app by rewriting the Java 8 codebase in Java 21 and migrating it to Azure cloud, improving scalability and reducing infrastructure costs
- Reduced team's tech debt score from 47.03 to 23.44 by addressing 53 critical and high vulnerabilities over 3 applications, increasing system security and scalability

Aristocrat <i>AI Software Engineering Intern</i> ; Austin, TX	Jan 2024 - May 2024
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- Enhanced in-game avatar responses by leveraging Large Language Models and Generative AI in Unreal Engine 5
- Integrated Text-to-Speech (TTS) and Speech-to-Text (STT) models for lifelike avatar interactions, contributing to more seamless gameplay and reduced dialogue latency
- Improved real-time rendering by integrating NVIDIA Omniverse, reducing latency for audio lip-sync animations

Silicon Labs <i>Software Engineering Intern</i> ; Austin, TX	Jun 2023 - Aug 2023
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- Increased code coverage from 21.5% to 81.5% across 4 C++ projects by expanding unit tests and Makefiles
- Resolved 18 Java bug and feature requests for Simplicity Studio IDE, improving team's product stability

Aristocrat <i>Software Engineering Intern</i> ; Austin, TX	Sep 2022 - Apr 2023
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- Developed proof-of-concept loyalty app using Angular for NFC communication with gambling machines
- Automated mobile wallet pass generation using Python scripts for integration into the loyalty app

The University of Texas at Austin <i>Undergraduate Teaching Assistant</i> ; Austin, TX	Jan 2022 - Apr 2023
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- Led recitation sessions for 15-20 students on C/C++ topics, data structures, and algorithms for 2 hrs/wk
- Created detailed supplemental resources praised by students, increasing satisfaction ratings for course by 15%
- Tailored teaching style to meet individual needs in office hours and discussion sections

PROJECTS

AI Music Generation Platform <i>Next.js, Python, Flask, React, MongoDB, NoSQL, Heroku</i>	Aug 2023 - May 2024
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- Led a team of 6 in developing a full-stack platform, integrating 4 AI models for real-time music generation
- Designed and implemented a scalable full-stack architecture using Next.js and Flask, deployed on Heroku
- Architected MongoDB infrastructure to minimize data storage and retrieval operation time

Hardware-as-a-Service (HaaS) Website <i>React, Python, Flask, MongoDB, NoSQL, Heroku</i>	Feb 2023 - Apr 2023
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- Developed a full-stack web app for hardware check-in/out, reducing request fulfillment time for engineering org
- Designed robust MongoDB database models and efficient Flask API endpoints for accurate hardware tracking
- Integrated a React-based frontend with backend APIs to create a seamless and user-friendly experience

TECHNICAL SKILLS

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- *Languages:* Java, Python, JavaScript/HTML/CSS, C, C++, TypeScript, SQL, NoSQL
 - *Frameworks and Libraries:* React, Node.js, Next.js, Angular, Flask, FastAPI, SpringBoot
 - *Tools:* Git, Linux, Jira, JWT