

Jane Housley

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EDUCATION

Brigham Young University

Master of Mathematics

Provo, UT

Aug. 2023 – April 2025

Bachelor of Applied and Computational Mathematics; Emphasis in Computer Science

Aug. 2020 – April 2024

EXPERIENCE

Software Engineer Intern

Epic Systems

Madison, WI

May 2024 – Aug. 2024

- Built a reusable cross-platform framework enabling all Epic mobile applications to efficiently create and maintain widgets and shortcuts.
- Developed iOS widgets, streamlining user workflows by reducing required taps by over 80% and providing quick access to critical hospital data from the home screen.
- Delivered comprehensive live demonstrations to hundreds of Epic employees, including the CEO, effectively showcasing newly developed shortcut capabilities.

Epic Systems

May 2023 - Aug 2023

- Designed and implemented iOS and Android shortcuts, significantly accelerating clinician workflows by a factor of five and impacting millions of users.
- Ensured robust security protocols in shortcuts to safeguard sensitive patient data.
- Conducted rigorous manual testing to validate shortcut functionality, usability, and ease of interaction, preparing products for quality assurance processes.
- Managed comprehensive code reviews and two rounds of QA testing, achieving early release and becoming the first intern project that summer deployed company-wide.

Data Science Research Assistant

Brigham Young University

Provo, UT

Aug 2022 – April 2025

- Developed a neural network utilizing a U-Net architecture to predict wind flow with a performance speedup of 7x compared to the leading wind prediction model.
- Organized and led weekly meetings with developers of WindNinja, leading wind predictor model to ensure seamless data assimilation
- Applied numerical PDE algorithms, including the Alternating Direction Implicit Method, to solve the augmented heat equation for modeling wildfire spread and wind dynamics.

PROJECTS

African Speech to English Text | *Python, Whisper, Fine tuning*

Feb 2025 – April 2025

- Fine-tuned OpenAI's Whisper automatic speech recognition model to translate Efik speech into English text.
- Fine-tuned a text-to-speech model for Efik, enabling synthetic speech data generation for low-resource languages.
- Generated additional synthetic speech data to further enhance model accuracy and performance.

Traffic Navigation Optimization Model | *Python, SciPy*

Feb 2024 – April 2024

- Created a mathematical model for finding the shortest path through obstacles of varying densities, i.e. moving through crowds, traffic, fluids, or dynamic terrain
- Formulated and solved the pathfinding task as an optimal control problem using SciPy, releasing code with potential applications in emergency response and military scenarios.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, Swift, Kotlin, Objective-C

Frameworks: React, Next.js, SwiftUI, Hyperspace

Developer Tools: Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ

Libraries: pandas, NumPy, Matplotlib, SciPy, SymPy, Scikitlearn, pytorch, Plotly, Keras, TensorFlow, Beautiful Soup, Whisper