Ethan Khoury

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EXPERIENCE

Software Engineer - Flight Test Instrumentation Team *C# .NET — Textron Aviation*

December 2023 - Present

- Supported 20+ internal Applications and led the development of new software solutions within a team of 4 developers.
- Designed and implemented an automated pre-flight telemetry configuration system, creating both server and client applications for remote machine setup and orientation across 15 machines. This innovation streamlined operations, saving numerous hours each week and eliminating the need for telemetry room setup.
- Developed an in-house 3D aircraft configuration solution to visualize test flights, replacing costly licensed software and saving the company tens of thousands of dollars annually.
- Created a custom library from scratch to decode video files and index individual frames, enabling synchronization of historical data with various video formats captured during tests.
- Built a library for bug reporting and feature requests integrated into all supported applications. This feeds data into an admin viewer application in order to track bug requests and features across all applications.

Software Engineer Intern - Simulator Systems Team *C# .NET — TRU Simulation + Training*

May 2023 - August 2023

- Collaborated with a dynamic team of 10+ developers, driving the development and maintenance of advanced software for state-of-the-art flight simulators.
- Spearheaded the implementation of 5 critical feature requests and resolved 15 bug fixes in a control panel application, ensuring production deployment by the end of the summer.
- Engineered a high-performance optimization for a navigational data parsing script, achieving significant reduction in load times through the implementation of parallel processing techniques.

UnderGraduate Artificial Intelligence Research Assistant *Python Linux— KDD AI Research Lab at Kansas State University*

December 2022 - August 2023

- Developed expertise in AI and Machine Learning techniques, with a strong emphasis on deep learning and reinforcement learning.
- Enhanced an existing Attention-Based Partially Decoupled Actor-Critic (APDAC) model by integrating stable baselines 3 support and incorporating the Crafter environment into the code.
- Conducted multiple experiments using the model, fine-tuning hyperparameters to optimize reward generation
- Conducted data analysis to validate findings and compare performance with other models, strengthening our research claims.

Software Engineer Intern - Diagnostics Team *C# .NET — Textron Aviation*

May 2022 - August 2022

- Successfully implemented multiple feature requests within a .NET C# WinForms application, collaborating closely with a team of 8 developers. Actively participated in design meetings and ensured timely delivery of feature enhancements.

PROJECTS & AWARDS

2022 Hackathon winner — *HourFi*

- Achieved multiple awards: Winner of Best Overall Hack (First Place), Best Mobile Hack (Hack on the Go!), and Best Hack with a Business Idea (K-State Center for Entrepreneurship)
- Developed a mobile application within 36 hours, despite having no prior mobile development experience.
- Led frontend development and implemented backend features for database consumption and user analytics within our 3-person team.

Dimension Labs AI - https://www.dimensionlabs.tech/

- **Developed a 3D Model Generation Platform**: Architected and built a web application using TypeScript and React, leveraging an AI model to convert 2D images into production-ready 3D models through an intuitive drag-and-drop interface.
- **Streamlined User Experience with Monetization**: Implemented a clean, efficient application that processes 3D generation while ensuring a smooth user experience. Incorporated a monetization strategy, offering 3D models for download at $3.99 per generation.

EDUCATION

Bachelor of Science in Computer Science — *Kansas State University*

Dean's List recipient