ALEX J. SHIN

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EDUCATION

Yale University, New Haven, CT Expected Graduation 2025
Bachelor of Science in Electrical Engineering and Computer Science, GPA: 3.85/4.0

- *Activities:* Yale Club Water Polo, Engineers without Borders, Yale Politic (Tech Team), Yale Computer Society, Yale Entrepreneurial Society

WORK EXPERIENCE

Chick-fil-A Software Engineering Summer Intern: *Digital Enablement Team: Tools Team* **May 2023- Present**

- Developed Full-Stack API-server to track internal tool usage metrics. Implemented and designed Flask backend server to receive data from internal tools via webhook and designed/implemented functionalities for HTTP requests to DynamoDB database. Developed and deployed React frontend on Backstage. Designed scripts for tools to trigger webhooks. Deployed server utilizing Docker containers and orchestrated deployment in Kubernetes. Used AWS Cloudwatch, API-Gateway, AWS Lambda to deploy other cloud-based solutions to improve work efficiency.
- **Skills Used**: Flask, DynamoDB, Docker/Kubernetes, Backstage, React.js, AWS (Cloudwatch, Lambda, API-Gateway)

The Yale Politic: *Frontend developer* **October 2021- May 2022**

- Worked with the tech team for the Yale Politic newspaper on the frontend program and design for The Yale Politic website. Developed and deployed primary user interface functions: scrolling article boxes, "read more" buttons linking to articles and pages, navigation, and dropdown menus (+ general graphic design/UI). Deployed website to over 6000+ Yale students
- **Skills Used**: React.js, Node.js

DeepMedia AI: *Software Engineer Intern/Product Development Assistant* **June 2022 – September 2022**

- Coded, tested, and designed the layout and functionality of the Universal Translator (UT) and Dubsync webapps.
- Primary Projects: Implemented a waveform generator in python for audio files in the backend database for Dubsync to visualize spikes in audio to aid in media framing and dubbing synchronization. Also worked on frontend organization and design for the UT. Led to faster framing, transcription, and translation of video files.
- **Skills Used**: React.js, Node.js, AWS, Python

ACTIVITIES/PROJECTS

Shutter Interactive Data Visualization Website **December 2022 - Present**

- Created interactive visualizations using data collected over two 3-week deployments on Yale's campus from Shutter, a robot photographer. Used plotly, matplotlib, numpy, and SciPy python packages in Juypter Notebook to create interactive 3D visualizations of Shutter. Used React.js/Chakra UI to create a fully-frontend interactive interface to aid in research and analysis of shutter data (spatial patterns of behavior and ~100 different social (verbal + non-verbal) interactions) – see source code at: https://github.com/alexjshin/shutter_web

Dynamic Memory Usage Analyzer in C **September 2022**

- Built tools in C that can help debug memory allocation errors. (returns heap usage statistics + advanced reports on memory bugs and leaks, catches common programming errors (invalid + double frees, invalid writes, overflow)

Toy Compiler in C **September 2022 – October 2022**

- Implemented compiler workflow in C that takes intermediate representation (IR) and compiles it down into x86_64 assembly. Further implemented middleware to transform and optimize IR before translation leading to faster performing machine code.

SKILLS

- **Languages**: English (native), Korean (native)
- **Frameworks/Tools**: Flask, Django, XML, HTML, CSS, JS, React.js, Node.js, Express.js, PostgreSQL, DynamoDB, RDS, Jupyter, MATLAB, VBA Excel , GitHub, LaTex, Arduino, Adobe Premiere/Photoshop, Microsoft Office,
- **Industry Knowledge**: Amazon Web Services (AWS), Kubernetes, Object-Oriented Programming, Web Development, Databases/SQL, Software Development, GitHub (version control)
- **Programming Languages**: Python (6yrs), Java (4yrs), C++ (2yrs), C# (2yrs), C (2yrs), Linux (2yrs), JavaScript (3yr), React (2yr), Flask (2yrs), Django (2yr), SQL (2yr), R (1yr), x86-64 assembly, Verilog (1yr)