ALEX J. SHIN

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EDUCATION

Yale University, New Haven, CT   Expected Graduation May 2025
Bachelor of Science in Electrical Engineering and Computer Science, GPA: 3.85/4.0
   Activities: Yale Politic (Developer: Tech Team), Yale Computer Society, Yale Entrepreneurial Society (Design Team), Yale Poker Club, Yale Club Water Polo, Yale Climbing Team
   Relevant Coursework: Algorithms, Probability Theory, Systems Programming & Computer Organization, Network Systems, Full Stack Web Programming, Discrete Math, Computational Intelligence for Games, Data Analysis and Exploration, Data Structures

SKILLS

- **Languages**: English (native), Korean (native)
- **Frameworks and Tools**: Flask/Django/Fast-API, XML/HTML/CSS, Javascript, React.js, Node.js, Express.js, PostgreSQL, DynamoDB, RDS, Jupyter Notebook, VBA, Excel, Github, Arduino, Adobe Premiere/Photoshop, Microsoft Office, LaTEx
- **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)

WORK EXPERIENCE

Chick-fil-A: *Software Engineering Summer Intern - Digital Enablement Team: Tools Team*   **May 2023- Aug 2023**
- Developed Full-Stack API-server to track internal tool usage metrics using Fast-API backend server to receive data/post requests from internal tools and React.js frontend to be deployed in Backstage.
- Designed/implemented packages/clients in Python and Go for tools to import to handle HTTP requests to DynamoDB + scripts 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**: Fast-API, Docker/Kubernetes, AWS (Cloudwatch, Lambda, API-Gateway, Dynamo), Go, Poetry, Python

Yale University: *Undergraduate Learning Assistant (ULA)*   **September 2023 - Present**
- Helped students with programming assignments involving data structures (stacks, queues, lists, trees, heaps, graphs), sorting and searching, storage allocation and management, data abstraction, efficient programing, and testing/debugging in C/C++.

Yale Interactive Machines Group: *Undergraduate Researcher*   **December 2022 – May 2023**
- Created interactive visualizations using data collected over two 3-week deployments on Yale's campus from Shutter, a robot photographer.
- Constructed interactive 3D visualizations of Shutter using plotly, matplotlib, numpy, and SciPy python packages in Juypter Notebook.
- Designed and implemented a fully-frontend interactive website to aid in research and analysis of shutter data (spatial patterns of behavior and ~100 different social (verbal + non-verbal) interactions) using React.js/Chakra UI

The Yale Politic: *Frontend developer*   **October 2021- May 2022**
- Developed and deployed primary user interface functions with frontend team to Yale Politic Website reaching over 6000+ Yale students and alumni.
- **Skills Used**: React.js, Node.js

DeepMedia AI: *Software Engineer Intern*   **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

Low-Latency HTTP Server   **October 2023**
- Developed lightweight high-performance web server in Java, compliant with RFC9112, enabling efficient handling of 100+ concurrent HTTP requests across virtual hosts. Leveraged async I/O with multiplexing loops on a dynamic thread pool.

Rucio Cloud-Cost Optimization (CERN)   **September 2023 – Present**
- Implemented novel content-multihoming algorithm dynamically optimizing storage costs for Rucio Storage Elements.
- Deployed new daemon integrated with Rucio replication rules selecting optimal replica assignments to minimize cloud storage costs.