Mackenzie Eng

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EDUCATION

City University of New York - Hunter College — New York, NY
Bachelor of Arts in Computer Science — *Expected Class of May 2025*
- **Relevant Coursework:** Data Structures, Algorithms, Relational Databases and SQL Programming, Database Management, Operating Systems, Intro to Computer Security, Flutter App Development

City University of New York - Hunter College — New York, NY
Bachelor of Arts in Adolescent Education - Social Studies, Grades 7-12 — *Class of May 2022*

EXPERIENCE

Software Engineering Intern — June 2024 – Aug. 2024
Own Company — *Englewood Cliffs, NJ*
- Executed a Proof-of-Concept, using Docker, that OpenTelemetry Metrics can be integrated into backups
- Added ability to add ServiceNow Rotation/Extension Tables to Exclusion Policy to improve backup performance
- Implemented retry logic handling for 503 Service Unavailable Error, ensuring successful backup of tables
- Gained skills in manual verification and unit testing using tools like Postman and testing frameworks like pytest

Software Engineer Intern — Sep. 2023 – Dec. 2023
Relm — *New York, NY*
- Wrote script that uses FFmpeg to convert clips in an AWS S3 bucket to mp4, stitches them and uploads the result
- Developed RESTful API endpoints with DynamoDB queries to handle user information
- Shadowed Chief Technical Officer and other founding executives in the process of product development
- Observed the uses of machine-learning scripts in Jupyter Notebook during Demo Days of RELM.AI features

PROJECTS

Escape Rooms | *Next.js, Tailwind CSS, Python, LangChain* — May 2023 - Present
- Building a text-based horror game, with branching story lines, based on a group project for boot-camp pre-work
- Modernizing front-end, by converting from vanilla JavaScript, HTML/CSS to Next.js and Tailwind CSS
- Adding in-game chat-bot, enriching storyline, by integrating a Retrieval-Augmented-Generation pipeline
- Applying industry standards, by implementing knowledge gained since project initialization, for personal practice

A Voiceless Voice | *Python, Hugging Face* — Sept. 2024 - Dec. 2024
- Developed an MVP of an ASL-to-Text-to-Speech application, in a trio, to facilitate accessible travel for the Deaf
- Built translation module, which integrated the mBART-50 model and the Argos Translate API, with help from TA
- Debuted MVP in trade-show presentation, with sales pitch and demonstration, at product road map finale
- Applied concepts such as redundancy from the 13-week CUNY Tech Prep Data Science boot-camp

Freya | *Django, Python, Amazon RDS, pgAdmin* — Aug. 2024 - Sept. 2024
- Prototyped a web application, with a team of 4, that aimed to leverage AI to optimize skincare routines
- Wrote RESTful API endpoints in Django to manipulate product and user data to and from PostgreSQL databases
- Collaborated with a team to refine app design and user stories for capstone project of the Headstarter Fellowship
- Contributed to the technical decision-making process by assisting in selection of tools for back-end infrastructure

TECHNICAL SKILLS

Languages: *Proficient*: Python, C/C++; *Intermediate*: JavaScript, SQL, Go, Kotlin
Frameworks: pytest, Django, Next.js, Tailwind CSS, LangChain
Tools: Git, Docker, AWS, pgAdmin, Hugging Face, Kaggle, Stripe, Pinecone, Postman, Firebase, Vercel, Jupyter Notebook, VS Code, PyCharm, Tableau, Groq, Figma, Trello, Jira, DNS, Android Studio
Libraries: FFmpeg, pandas, NumPy, Matplotlib, React.js