

Dylan P. Jackson

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EXPERIENCE

AMAZON | SOFTWARE DEVELOPMENT ENGINEER

Apr 2022 - Sep 2023 | Seattle, WA

- Led architecture and development of a web application displaying Alexa skill routing model metrics to improve scientist model analysis time utilizing TypeScript, JavaScript, React, Python and AWS CDK.
 - Built dynamic frontend with features enabling user-customized data queries via live API interactions to custom backend. Surfaces performance insights through custom metrics and graphs.
 - Engineered backend using a PostgreSQL database w/ schema design. Automated by AWS CloudWatch trigger on daily Spark bash data collection job. All components maintained through AWS CDK.
 - Implemented a Data Annotation Request Form into web application, designed AWS system components to support data flow, which reduced data annotation bottleneck for scientist experimentation
- Expedited LLM experimentation timeline by onboarding scientists to offline development system.
 - Created extensive runbook for LangChain experimentation in Python with support for multiple dev environments.
 - Developed infrastructure in AWS AppConfig to support parity between online and offline LLM systems.
- Enabled hundreds of existing and developing Alexa API's to onboard to new LLM inference system, seamlessly integrating old architecture with new inference system, using Java.
 - Implemented new Alexa Orchestration action types by rolling out feature across rapidly evolving LLM ecosystem.

AMAZON | SOFTWARE DEVELOPMENT ENGINEER INTERN

Jun 2021 - Aug 2021 | Seattle, WA

- Enabled Alexa scientists and engineers to monitor previously unavailable resource utilization data of Hyprank and Shortlister (skill routing) models by creating generic benchmark framework in Python.
- Partnered with peer intern to display CPU, GPU and time usage metrics through custom frontend in secure environment.

WAYFAIR | DATA ANALYTICS CO-OP

Jan 2021 - Jun 2021 | Boston, MA (Remote)

- Provided managers ability to more effectively analyze candidate statistics, improving hiring goal metrics. Enabled through curated analytical reports using R, Python, and SQL to lead discussion about candidate information.

MITRE | SOFTWARE DEVELOPER INTERN

May 2019 - Aug 2019 | Bedford, MA

- Increased internal hiring speed potential from one month to one week with internal chatbot in Microsoft Teams to serve as intermediary between hiring manager and employees. Utilized Microsoft Bot Framework, Microsoft Graph, built with C#.
- Lead proposal for new co-op project to create voice assistant to aid co-op onboarding. Presented to internal Co-Op Board.

PROJECTS

COMPUTER SCIENCE HOUSE INTRODUCTORY EVALUATOR

- Developed a Tertiary Logistic Regression Classification Model for RIT's Computer Science House which predicts the intro process evaluation result of an applicant with 83% accuracy.
- Built in Python with numpy and scipy in Jupyter Notebook, data curated and cleaned from PostgreSQL server.

LIL LEXIE

- Developed Python backend for an Alexa skill which intelligently engages in a rap battle with the user.
- Leverages NLTK's trigram tagger to identify parts of speech in user's rap, then creates rap lyrics either rhyming with or using lyrics from the user. Won Best Smart Speaker Kit at HackDartmouth 2019.

EDUCATION

ROCHESTER INSTITUTE OF TECHNOLOGY

BACHELORS IN COMPUTER SCIENCE

Dec 2021 | Rochester, NY

RIT AI CLUB : PRESIDENT

COMPUTER SCIENCE HOUSE : EVALUATIONS DIRECTOR

NEW STUDENT ORIENTATION : ORIENTATION SUPERVISOR

COMPUTER SCIENCE DEPARTMENT : STUDENT AMBASSADOR

HONORS PROGRAM

LANGUAGES & SKILLS

Python | R | SQL | Matlab | Java | C | C# | C++

numpy | scipy | pandas | LangChain

Keras | Tensorflow | scikit-learn | pytorch

HTML | CSS | Javascript | Typescript | React

Data Processing | System Design | Modeling

HOBBIES

Running | Climbing | Snowboarding | Spikeball

Piano | Swing Dancing | French | Video Essay