

# DANIEL MAO

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## SUMMARY

A skilled and motivated computer science professional with a strong interest in data structures, algorithms, and machine learning, who has extensive experience in software design and development, has worked as a machine learning researcher and machine learning engineer intern, and has made valuable contributions to open-source projects, including projects like a website designed to help students improve their foreign language accents. Proficiency in Python, Java, React.js, AWS, PyTorch, TensorFlow, and SQL, combined with a passion for delivering innovative solutions and driving results, has enabled the candidate to develop a strong skill set that can be eagerly applied in collaborative, meaningful projects. A challenging and dynamic role in the industry is actively being sought that will allow further refinement of their skills and impactful contributions to the field.

## EXPERIENCE

### Saint Louis University

Machine Learning Researcher

07/2021-Present

- Investigated the impact of Machine Learning on data privacy by implementing membership inference attacks.
- Preprocessed datasets for ML model fit and used CUDA for model execution.
- Determined by binary classification if a piece of data was used in ML model training.

### Spacelab

Machine Learning Engineer Intern

06/2022-08/2022

- Automated ETL process, ML model deployment into a NoSQL database with a GraphQL API.
- Improved Convolutional Neural Network for binary classification of exoplanet images.
- Implemented ML model in AWS cloud computing microservices with Lambda functions and EC2 instances for scalability and automation.

## PROJECTS

### SIB (React) [<https://github.com/oss-slu/Seeing-is-Believing>]

- SIB is an open-source project that helps students to improve their accents on foreign languages through a website that can be monitored by instructors.
- Used Firestore to store our data which is a NoSQL database that is in the cloud in order to store the user information for the login and relevant data.
- Assisted in assigning and resolving project tickets, contributing to the successful completion of project deliverables and ensuring timely resolution of technical issues.
- Implemented Continuous Deployment and Continuous Integration (CD/CI) processes in Heroku to ensure seamless and automated deployment of code changes to production.

### Emotion Detector (Python)

- Trained a program that can take images of people's faces and predict their emotions based on their facial features using machine learning models using a dataset from Kaggle (Website for Datasets).
- Implemented two different models to train the program which are Linear Regression and Convolutional Neural Network where the tested accuracy has a 78% rate of success in the predictions.

### 2048 (Java)

- Contributed to the development of a game app using Gradle and following software design principles.
- Implemented a MVC design for efficient error testing and divisible work frames
- Collaborated with team and used Git to organize code and perform JUnit tests in the mode

## EDUCATION

Bachelor of Science in Computer Science  
Saint Louis University  
May 2023  
St. Louis, MO  
GPA: 3.81/4.00

## ACADEMIC AWARDS

Dean's Scholarship  
Dean's list for six consecutive semesters

## RELEVANT COURSES

Data Structures  
Algorithms  
Software Design  
Software Engineering  
Machine Learning  
Web Technologies  
Databases  
Operating systems  
Computer Architecture

## SKILLS

Python  
JavaScript  
HTML  
CSS  
C/C++  
Java  
React.js  
AWS  
Pytorch  
Tensorflow  
SQL  
R

## LANGUAGES

English  
Spanish  
Chinese (mandarin)