Jaxon Bailey

New York City, New York, United States jaxonbailey01@gmail.com 7372302137 hi-jaxon.github.io/

EDUCATION

Master of Computer Science | University of Pennsylvania | 3.68

Philadelphia, Pennsylvania | 2025

Bachelor of Science in Mechanical Engineering | University of Texas at Austin

Austin, Texas | 2018

EXPERIENCE

Machine Learning Engineering Intern | Crown Castle | Austin, Texas | June 2024 - August 2024

- Implemented computer vision solutions to enhance infrastructure management and reduce operational costs of shared telecommunications infrastructure.
- Developed ML model leveraging Google Street View images to assess tower capacity for additional client equipment and drastically increase ROI.
- Trained and implemented detection models to streamline tower maintenance and significantly reduce time and expenses.
- Utilized a range of technologies and platforms, including Pytorch, Label Studio, Ultralytics, Roboflow, Docker, Git, and Meta's SAM library.

Software Engineering Intern | Homefile | Austin, Texas | March 2024 - June 2024

- Developed an automated document scanner with Google Cloud Platform technologies, demonstrating proficiency in cloud-based solutions.
- Contributed to agile team projects, actively participating in weekly standup meetings to provide progress updates and coordinate tasks.
- Gained firsthand experience in the software development life cycle through collaboration with senior developers.

Lead Teacher | Human Academy | Tokyo, Japan | March 2021 - December 2022

- Developed and implemented a 3-year English curriculum at a prestigious international junior high school.
- Collaborated with fellow teachers to ensure a cohesive and effective language learning experience.
- Promoted to Lead Teacher, training incoming educators and providing guidance on teaching methodologies and curriculum execution.

Research Assistant | University of Texas at Austin | Austin, Texas | August 2017 - May 2021

- Played a key role in the development of WAAVES, a Matlab program for parsing audio data in animal research labs.
- Improved program robustness by implementing error handling and creating an easy-to-understand UI.
- Collaborated with an external development team to build an ML-based web version of WAAVES..

PROJECTS (MORE ON HI-JAXON.GITHUB.IO)

Cell Tower Capacity Assessment | Crown Castle | June 2024

- Utilized DepthFM, a monocular depth estimation library, to preprocess cell tower images and more easily segment towers using YOLOv8 model.
- Trained ML model to classify tower sections based on occupancy, identifying whether each section housed client equipment or had available space to lease.
- Conducted data preprocessing and augmentation to enhance model performance and robustness.
- Employed tools and technologies including YOLOv8, Label Studio, Jupyter Notebook, Pytorch, and DepthFM to achieve project objectives.

AI Document Parser | Homefile | May 2024

- Leveraged Google Cloud Platform's document parsing functionalities to extract data from various receipt formats, including photos and scans.
- Ensured accurate and efficient data extraction for enhanced workflow automation.

Japanese Handwriting Recognition | January 2024

- Developed a Japanese handwriting recognition program in Python using the Tensorflow AI framework and Keras library.
- Enhanced model performance by adjusting parameters and implementing data augmentation, resulting in 83.4% validation accuracy.
- Successfully tested the model on a new dataset, demonstrating robustness by making accurate predictions with up to 100% confidence.

OpenAI Biography Parser | University of Pennsylvania | December 2023

- Developed biography parser utilizing the GPT-3 Completions API, employing natural language processing and large language models.
- Conducted fine-tuning of the model on a JSON dataset, utilizing Wikipedia biographies as input to enhance accuracy and relevance.
- Implemented the project using a Jupyter notebook, highlighting proficiency in data science and collaborative development environments.

SKILLS

Programming Languages: Python, Java, C, Javascript, Matlab, HTML/CSS

Machine Learning & Data Science: Pytorch, Tensorflow, Keras, Ultralytics, Pandas, Numpy

Tools & Platforms: Jupyter Notebook, Google Cloud Platform, Docker, Roboflow, Label Studio, Git, Github