Jeongin Lee

jeonginlee0304@gmail.com | Github | Linkedin

EXPERIENCE

Google Summer of Code @ Processing (GitHub | Website | Project Description)
June 2022 - September 2022
Open Source Contributor
Remote

- **Developed a Machine Learning library (Creative Machine) for Processing in Java** for beginners to be able to run Computer Vision (CV) and Natural Language Processing (NLP) on images and videos in real time.
- Devised custom Java objects to translate and store input and output data of TensorFlow and MXNet models.
- **Designed UI using Figma and built a responsive website (Creative Machine website) for library documentation using React, HTML, CSS, and GatsbyJS**, web pages automatically generated from Markdown files.
- Created image and video demos of each model with step-by-step guides and API documentation to guide users.

MoMA Lab, New York University (Presentation)
May 2022 - July 2022
Machine Learning Research Assistant
Remote

- Enhanced Machine Learning-based anomaly detection solutions for cyber security on Industrial Controls Systems (ICS).
- **Developed, trained, and evaluated GRU, LSTM, and SR-CNN models using TensorFlow, PyTorch, and Jupyter notebook.** Increased 96% (F1 Score) detection accuracy by the hyperparameter tuning and an extra 29% by applying Moving Average and Gray Area Smoothing.
- Created Matplotlib data visualizations and feature correlation graphs of the HAI dataset that contains over 1 million rows of data for 86 sensors.
- Participated in weekly meetings and presented research findings with data.

EDUCATION

New York University Abu Dhabi
Expected May 2024
B.S. Computer Science | Minor in Mathematics, Interactive Media
Abu Dhabi, UAE | Currently studying away in New York

- GPA 3.78
- Awarded 4-year full merit scholarship
- Relevant Coursework: Data Structures, Algorithms, Computer Systems Organization, Operating Systems, Agile Software Development & DevOps, Multivariable Calculus, Linear Algebra
- Activities: HackAD Executive Board Member (Spring 2022)
- Certifications: AWS Solutions Architect - Associate, Deep Learning Specialization from DeepLearning.AI

PROJECTS

Type Your Words (Project Website | GitHub)
January 2021 - March 2021
Python, Django, AWS, Web Development

- An interactive Django, Python website that generates random images based on what user types.
- Devised a custom randomization algorithm to copy and paste images to generate diverse artworks.
- Designed a serverless Back-end architecture integrating AWS API Gateway, Lambda, S3, RDS (PostgreSQL), and VPC.

Syllabus To Calendar (GitHub)
November 2021
Python, Machine Learning (ML), Natural Language Processing (NLP)

- A Python script that automatically generates Google Calendar events of major deadlines from course syllabus PDFs using Stanford's SUTime NLP library.
- Devised an algorithm utilizing the NLP model to detect keywords and convert the output into a .csv file.

ResQ (GitHub)
March 2022 - April 2022
Python, Web Development, Quantum Computing

- A Streamlit, Python web application that helps NGOs to optimize human resource allocation during a crisis using Quantum Computing.
- Implemented form submission, user sign-up, log-in, and log-out features integrated with Flask API.
- Improved user experience by adding a multi-selection feature when selecting different tasks.

SKILLS

Python, Java, C++, HTML/CSS, Git, Web Development, Machine Learning, AWS
Languages: English (Proficient), Korean (Native)