Kohei Suzuki

Machine Learning Engineer

kohei.suzuki808@gmail.com https://boblef.github.io/

Summary

One of the highly self-motivated machine learning engineers in the Vancouver area with more than 2 years of machine learning experience and 6 months of working experience as a machine learning engineer intern at a startup in Vancouver.
Able to do from sourcing data to deployment for productions on the cloud as well as native and always try to optimize each process by using appropriate metrics, algorithms, and data structures.

Working Experience

Singular Software Inc. Jan 2019 - Jun 2019

Machine Learning engineer intern
Reference from the CEO, Bruce Sharpe:
https://boblef.github.io/docs/Reference_letter_for_Kohei%20Suzuki.pdf

Singular Software is a company developed a phone-based hearing assistive app, HeardThat which was debuted at CES 2020, that helps people to hear speech in noisy situations by using the power of deep learning. The company was nominated at the top 10 out of about 200 in the New Venture BC 2019 competition and was also the winner of 2020 What's Next Innovation Challenge.

- Joined the team in the early development phase, and took initiative on the role of creating several platforms with **Flask** and Javascript for model evaluation, constructing database with **SQLite** where results of the evaluation were kept, implementing, and training machine learning models.
- Developed internal and external platforms with **clarified documentation**. The external platform was for Mechanical Turk to collect scores for each data sample that was used to calculate metrics. The internal system was a Flask application by mainly using **Matplotlib**, **Numpy,** and **Scipy** where team members could see waveform and spectrogram of any audio files and play around with them interactively.
- Presented members the result of evaluation with appropriate metrics such as **WER** and **MOS**.
- Worked with team members in an **agile** way by changing things as we needed and learned how **Scrum** works. Since the internship was **remote**, gained necessary skills such as **SSH** on **Ubuntu**, **good communication skills** with both verbal and written English with concise explanations.

Personal Projects

DeepColors app for iOS Jan 2020 - Present
AppStore: https://apps.apple.com/us/app/deepcolors/id1540025064
- **A mobile app for iOS** that helps users colorize grayscale images and sketches that they draw, by using the power of DeepLearning. The app is available on AppStore.
- Trained **GANs** on GPUs on **GCP** by following original papers, created the client-side in **SwiftUI** and **Swift**, set up the server with **Flask** and **Apache2** on **Ubuntu** on GCP, used **Firebase** for the app analytics, and implemented **Admob** for the monetization.
- Took about 3 months to publish the app from the day I learned how to create a view printing out "Hello World" in a View on iOS.
- Keep updating and adding features to expand the abilities that the app can do, and started learning **Kotlin** in order for **Android**.

Speech-To-Text app with Flask Jul 2020 - Aug 2020
Github: https://github.com/boblef/auto_transcript
- Was a **Flask** app in which user can upload a video or an audio file and can download a zip file that contains files of transcripts of the speech in the file they uploaded.
- It took audio from the video they uploaded and converted to 1-D Numpy array fed into Baidu's DeepSpeech model after pre-processing was done. The output from the model was then fed into a language model to improve the prediction accuracy.

Twitter financial sentiment analysis Jul 2020- Jul 2020
Github: https://github.com/boblef/twitter_sentiment
- Was a **Flask** application deployed with **Docker** in which users can enter hashtags and keywords that they want to stream on and they can see the information of tweets collected such as the text, the date of the post, sentiment scores, and so on.
- **FinBERT**, which is a **pre-trained NLP** model to analyze the sentiment of the financial text, was used to give **sentiment scores** to tweets collected with **Tweepy**.
- **Pandas** dataframe was used to display the result on the frontend, and Javascript and jQuery were also implemented.
- **CircleCI** was used for testing the application when code was pushed to GitHub.

Education

- GCI2019 at the University of Tokyo Dec 2019 - Mar 2020
- 7 Gate Academy, Machine Learning Bootcamp Jul 2019 - Sep 2019
- Institute of Technology Development of Canada Jul 2019 - Jun 2019
  Two years Diploma in Computer Science: 90.23%
- Brain Station Vancouver, Data Science Bootcamp Apr 2018 - Jun 2018
- Bachelor Degree in Computer Science at Tokyo City University Apr 2012 - Apr 2013

Skills

Programming Languages: Python, C/C++, Swift, SwiftUI, SQL, Java, Bash
Machine Learning: Computer Vision, NLP, Time Series, Reinforcement Learning, Classic ML Algorithms
Python Libraries: Tensorflow, PyTorch, Pandas, Numpy, Matplotlib, OpenCV, Sklearn, Jupyter Notebook, Flask, unittest
OS: Linux, MacOS
Others: AWS (EC2, DynamoDB, CloudWatch), GCP, Github, iOS app development, Docker, CircleCI, Scrum, Agile, Algorithms and Data structures, Quantum programming (Dwave-Ocean-SDK)