TE-HOU (EDDIE), TSENG

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EXPERIENCE

Software Engineer

Multibeam

Jul 2020 – Present San Jose, CA

- Implement APIs for controlling wafer stages by C++ and Python
- Synchronized all devices for Multi-Column System (including sensors, vaccum devices, isolators, PowerPMAC, wafer-transfer system, electrical beam columns, etc.), stage control system, interferometer and all the computers related to wafer writing process to below 100ns by C++ and real-time Linux
- Established two-way (read/write) communication control between PLC and Multi-beam Linux software for data analysis and GUI control through OPC UA by C++ and open62541

Software Engineer

Corning Inc.

Feb 2020 – Jul 2020 Corning, NY

- Improved inspection efficiency and accuracy by using VGG-19 and RF model (With large data and fine labeling, the accuracy improved 34% when compared with the based classifier)
- Fine-tuned every model such as data preprocessing and hyper-parameter tunning
- Compared different CNN models and finalized the best model for inspection systems in plants' line
- Programmed scripts using Python for further data analysis (improving models)

Research Assistant

Swartz Center of Computational Neuroscience

Nov 2019 – Feb 2020 San Diego, CA

- Improved accuracy from 65% to 97% for Pupil tracking system when finding Region of Interest(ROI) by implementing YOLO object detecting system using Python.
- Programmed scripts using Python for labeling training data
- Wrote manual scripts to teach other team members how to use the model for finding ROIs in the Pupil tracking system

Software Engineer Intern

Corning Inc.

Jul 2018 – Aug 2018 Taichung, Taiwan

- Improved inspection efficiency and accuracy by programming a script for operators using Halcon and C (Can detect 4 times more defect images than the original program)
- Developed rules for classifying defect images by using image processing techniques
- Secured Best Presentation format in the final presentation contest
- Participated in Six Sigma training programs and learned concepts such as DMAIC and DMADV

Intern

Ericsson

Jul 2015 – Aug 2015 Taipei, Taiwan

- Responsible for solution support for the Connected Vessels Project of U-Ming Marine. It was a global project which provides both data and voice communication between vessels and fleet management at U-Ming HQ

EDUCATION

MS in Electrical and Computer Engineering

University of California, San Diego

Sep 2017 – Jun 2019 San Diego, CA

- Machine Learning and Data Science
- GPA: 3.4/4.0

BS in Communication Engineering

National Taipei University

Sep 2012 – Jun 2016 Taipei, Taiwan

- GPA: 3.5/4.0

SKILLS

Programming

- Python, C#, JavaScript, C++, Matlab, Halcon

Data Analysis

- SQL, Pentaho, Hadoop, Pandas

Machine Learning

- Data Preprocessing, Supervised/Unsupervised Learning, Deep Learning
- TensorFlow, Keras, scikit-learn, Pytorch

Web Development

- HTML, CSS, React.js, Node.js, MongoDB, RestFul API

Language

- Chinese (Mandarin) : Native
- English : Fluent

PROJECTS

E-commerce data analysis

University of California, San Diego

Jan 2019 – Mar 2019 San Diego, CA

- Developed Pantaho Kettle script to clean data and load the data on local Postgres database. Using SQL to find the most relevant features for impacting the company revenue
- Using PySpark regression (DT, MLP, CNN) and classification (DT) to predict the review score, giving the product's price, shipping fee, delivery time and category. MSE of regression is 1.2 after 150 epochs and classification accuracy is 74% after 100 iterations

Kaggle Humpback Whale Identification Challenge

University of California, San Diego

Mar 2018 – Jun 2018 San Diego, CA

- Implementing several classical CNN and pre-trained models, such as Siamese Network and VGG-19, to calculate the similarity and identify whale species (rank 135 of 494 and beat the benchmark in Kaggle)