Yu-Wen Chen

📱 (541) 908-9264   ✉ yuwenchen.us@gmail.com   ⦿ /ywchn   in /yuwen-chen-osu

WORK EXPERIENCE

AeroTract LLC   Albany, OR USA
Computer Vision and Deep Learning Engineer   Aug 2021- Present
- Use Detectron2, Pytorch, and Tensorflow to build customized object detection and instance segmentation models for use in forestry and agriculture fields maintenance. Utilize transfer learning and activate learning to design and implement process pipeline to optimize the model performances
- Design and construct large scale data processing pipelines (aerial images) for prior modeling and post modeling
- Cooperate with UAS/data scientists to analyze the model outputs, producing informative visualization plot and graph to the clients
- Performed code review, optimized for data processing efficiency and integration

Oregon State University KidsSpirit   Corvallis, OR USA
Assistant to Program Director   Oct 2020 - Jun 2021
- Webpage editing and design using HTML to integrate registration system and youth program information with Drupal 8
- Assisted in the hiring of 100+ applications of summer day camp using idea-logic software and Google spreadsheets

Telecom Technology Center   Kaohsiung, Taiwan
Information Security Intern   Jul 2017 - Aug 2017
- Experimented with encryption and decryption of the advanced encryption standard algorithm
- Assisted on smartphone encryption examination
- Contributed to company's contracts translation

EDUCATION

Oregon State University   Corvallis, OR USA
Master of Engineering in Computer Science, GPA: 3.97/4.0   Sep 2019 - Jul 2021
- Academic excellence scholarship (2 years)
- Coursework: Deep Learning, Machine Learning, Natural Language Processing w/ Deep Learning, Matrix Analysis and Signal Processing & Machine Learning, Scalable Querying & Machine Learning, Database Management system, Computer Graphic Shader

National Kaohsiung University of Science and Technology   Kaohsiung, Taiwan
Bachelor of Science in Computer and Communication Engineering, GPA: 3.4/4.0   Sep 2015 - Jun 2019
- Third place in the monograph competition

SKILLS

Programming Languages | Python, C, C++, Haskell, SQL, Swift, HTML
Frameworks & Libraries | Pytorch, Tensorflow, Keras, Detectron2 (CV), SpaCy (NLP), Matplotlib, Scikit-Learn, MySQL, OpenGL, Pandas
Developer Tools | Git, Unix/Linux, Docker, QGIS

PROGRAMMING PROJECTS

Save Your Words - Sentence Extender Model
Built a Seq2seq model with soft-attention mechanism to paraphrase and forcedly extend the given sentences while still maintaining the original semantics. Designed new beam-search to manipulate the output distribution, providing more reasonable output sentences while extending the sentence. Writers can use the model to rephrase sentences without shrinking them.

Shopee Price Match Model
Designed and built a product matching model to classify the categories of products so that retail companies can provide customers a price comparison function. The integrated model took both image and title data to generate three different embedding outputs to feed in KNN for more efficient clustering.

English-to-German Translator
Built a Seq2seq model to translate English sentences into German sentences. Bidirectional LSTM, scaled-dot product attention and top-p sampling are used in this model structure. Users can analyze how words connect between two languages based on the attention diagrams.

Data Doctor - Disease Correlation Analysis
Aggregated large disease data for U.S. states to identify anomalies and correlations between these factors and the occurrence of diseases by visualizing the result after using SQL query. The insurance company can modify their health care selling strategy based on this analysis to improve their selling.