

# TE-HOU (EDDIE), TSENG

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Machine Learning Explorer, Innovation Pioneer, Dancer

## EXPERIENCE

### Software Engineer

#### Corning Inc.

📅 Feb 2020 – Present

📍 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 tuning
- 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 2019

📍 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

## 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)

## 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

## EXTRACURRICULAR

### Founder

#### Dancing Club (ShenAo Elementary School)

📅 Jul 2016 – Jul 2017

📍 Keelung, Taiwan

- Founded Dancing Club for not only for remote area students but also for families
- Arranged shows for members to show their skills after every semester
- Raised funding for Dancing Club and remote area students' education

### Team Member

#### Graduate Student Association

📅 Jan 2016 – Jun 2016

📍 Taipei, Taiwan

- Organized Commencement ceremony for undergraduate students in National Taipei University

### Team Member

#### University Pop Dance Group (NTPUPDC)

📅 Sep 2012 – Jun 2016

📍 Taipei, Taiwan

- Organized competitions for all undergraduate students in Northern Taiwan
- Raised funding for Northern Taiwan Dance Competitions