Chih-Yu (May) Chang

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Experience

KLA Corporation **Nov. 2021 – Jul. 2022**
Application Engineer *Tainan, Taiwan*

- Devised a Python tool that reduces the time of XML data processing up to four hours which results in earlier issue identification and better team productivity.
- Maximized daily inspection throughput by adjusting parameters and deploying latest build code onto tools.
- Analyzed and resolved technical issues for customers and coordinated with R&D team for continuous improvement.

National Space Organization (NSPO) **Sep. 2019 – Feb. 2021**
Graduate Research Assistant *Hsinchu, Taiwan*

- Identified necessary satellite metadata for dynamic image generation of Formosat-8 satellite.
- Developed a GUI in Python to compute satellite data, digital elevation model (DEM), and ortho-image, enabling the generation of dynamic images based on collinearity equations.

Department of Geomatics, NCKU **Sep. 2016 – Jan. 2018**
Undergraduate Research Assistant *Tainan, Taiwan*

- Improved the existing marker-based localization algorithm for more precise indoor positioning and lower computing resources compared to the feature-based localization algorithm.
- Employed computer vision and neural network techniques for distance estimation, and trilateral positioning algorithm for determining user location.

Projects

Recipe Website | *JavaScript, CSS, HTML* |

- Created a responsive recipe website which integrates API for recipe searching.
- Implemented features such as bookmarking, recipe uploading, ingredient amount adjustment and search suggestions for more personalized user experience.

Automatic High Definition Map Generation | *Python, Self-driving Perception* |

- Automated the process of generating traffic sign HD maps for autonomous vehicles.
- Tailored the PointNet neural network model to enhance traffic sign segmentation, resulting in 83% average recall rate.
- Adjusted GoogLeNet model to attain an accuracy rate over 90% in classifying traffic signs.

Department Exposition App | *Java, Android Studio*

- Built an Android app featuring task-based games for interactive campus tours and departmental introductions.
- Improved user engagement and experience by incorporating Google Geofences API, mobile accelerator, and vibrator features to optimize the app's functionality.

Path Tracking Robot | *Python, NVIDIA JetBot*

- Collaborated with a cross-department team to design an collision avoidance robot with control theory and deep learning.

Skills

Languages: English (Fluent, TOEIC: 900), Chinese (Native)
Programming/Tool: JavaScript, HTML, CSS, Python, tkinter, Java, Linux, Git, Matlab

Education

National Cheng Kung University (NCKU) **Sep. 2015 – Aug. 2021**
M.S. & B.S. degree in Geomatics *Tainan, Taiwan*

Master Thesis: Multi-modal HD Map Generation with Deep Learning

Courses: *Frontend Development, Mobile Application Programming, Deep Learning, Computer Vision, Foundation of Computer Science*

Awards / Achievements

- Master Thesis Award - Chinese Society of Photogrammetry and Remote Sensing
- Undergraduate Thesis Award - ChimeBall Technology
- Undergraduate Research Fellowship - Ministry of Science and Technology
- Outstanding Talent Scholarship - Bank SinoPac