Chang Min, Chen

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Work Experience

R&D Engineer *Jul 2022 – Aug 2022*
AUO Hsinchu, Taiwan

- Independently designed and developed a medical imaging algorithm during a summer internship. Achieved a top-three ranking out of approximately 60 projects at the summer internship results presentation.
- Utilized **Python, OpenCV, Pytorch, and VTK** to create the algorithm. Trained a machine learning model to automatically segment medical images.
- Provided colleagues with expert advice on medical imaging principles, **DICOM** file formats, and image processing. Actively shared knowledge and assisted team members in understanding the intricacies of medical imaging.

Research Assistant *Mar 2018 – Apr 2021*
National Yang Ming Chiao Tung University Taipei, Taiwan

- Utilized **MATLAB** programming to process a substantial dataset of MRI images from around 300 patients, along with their **DICOM-RTSS** information.
- Presented research findings at the 2019 International Symposium on Medical Imaging and Radiology, securing the first prize for an English oral presentation.
- Secured Ministry of Science funding through a well-crafted proposal, showcasing effective project planning and objective articulation.

Projects

Functional MRI Analysis of Chronic Low Back Pain *Jan 2022 – Jul 2023*
National Taiwan University Taipei, Taiwan

- Discovered and presented findings at **international conferences** in Toronto and Sydney, emphasizing the cross-network impact of chronic low back pain on brain connectivity.
- Independently handled the project, utilizing **MATLAB, R** for image processing and clinical data analysis.
- Employed various techniques, including frequency filtering, regression analysis, principal component analysis, and independent component analysis to analyze functional MRI data.

Virtual Reality Game Development *Sep 2022 – Jan 2023*
National Taiwan University Taipei, Taiwan

- Won first place in the Cross-Domain category at the 2023 VGW Awards, showcasing the game's innovative gameplay.
- Designed game levels and scenes using **Unity**, implemented locomotion controls based on Oculus SDK, and incorporated AI navigation for character tracking.
- Demonstrated proficiency in Git version control, Unity game development, and **C#** programming for VR applications.
- Collaborated with a multidisciplinary team from National Taiwan University and National Taiwan University of Science and Technology.

Tumor Response Prediction using Machine Learning *Jul 2020 – Apr 2021*
National Yang Ming Chiao Tung University Taipei, Taiwan

- Presented the project to the Taiwan Ministry of Science and Technology, securing funding for further research.
- Trained **machine learning** models to predict post-surgery tumor responses in patients with Vestibular Schwannoma using pre-surgery MRI images.
- Developed deep learning models using **MATLAB** and the **U-net** architecture.
- Processed large medical image datasets, trained machine learning models for tumor **segmentation** and response prediction.

Certifications

Medical Radiation Technologist | Ministry of Health and Welfare *Sep 2021*

Education

National Taiwan University *Aug 2023*
Master of Science Taipei, Taiwan

National Yang Ming Chiao Tung University *Jun 2021*
Bachelor of Science Taipei, Taiwan

Skills

- Python | MATLAB | R | Unity | C# | Pytorch | OpenCV | VTK | DICOM | NIfTI | Git
- Machine Learning | Image Processing | Medical Images | Statistics | Clinical Data | VR | OOP