Hsi-Ming Chang

619-800-3894 | hmchang.phys@gmail.com

WORK EXPERIENCE

CureMetrix San Diego, CA

Data Scientist Jan. 2016 – present

- Implement multi-view **object detection** module
- Established database of images with artificial object or benign tumor from over 10,000 images
- Developed interactive bounding box tool in MATLAB for user to create, edit, or delete bounding boxes on image
- Generated segmentation masks or bounding boxes for images with implant, compression device, or benign tumor
- Replaced legacy segmentation module with deep learning **object segmentation** module and improved sensitivity from 0.60 to 0.99
- Improved benign tumor **classification** AUC from 0.91 to 0.92 with enhanced neural network architecture
- Evaluated cutting edge GPU and TPU performance

TECHNICAL SKILLS

Programming Languages**:** Python, MATLAB, Java, Fortran

Deep Learning Frameworks: TensorFlow, Caffe

Development Tools: Git, Docker

PRESENTATION

"Deep Learning and Use of GPUs in Mammography," NVIDIA GTC 2018, Silicon Valley

EDUCATION

University of California, San Diego San Diego, CA

PhD, Theoretical Particle Physics Dec. 2015

Dissertation: "Topics in Effective Field Theory"

National Taiwan University Taipei, Taiwan

MS, Experimental Particle Physics Jun. 2006

Thesis: "Search for Axions at the Kuo-Sheng Nuclear Power Plant with a High-Purity Germanium Detector"

National Tsing-Hua University Hsinchu, Taiwan

BS, Physics Jun. 2004

LANGUAGES

Mandarin Chinese, English