Chun-Min (Mindy) Jen US permanent resident authorized to work in US | Willing to relocate/Remote work

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Data Scientist/Machine Learning Research Scientist with 10 years of academic research experience gained through analyzing big data among various medium-size (50-200), cross-national collaborations, I bring strong analytical skills in mining/interpreting data. Experiences include:

- **Machine/Deep Learning**: Leverage machine/deep learning strategies in computer vision using Regression, Natural Language Processing (NLP), Convolutional/Recurrent Neural Network (CNN, RNN) and Generative Adversarial Network (GAN).
- **Quantitative Modeling in Python and SQL**: Utilize Python and SQL to train machine learning models and perform data cleansing/mining. Use data science toolkits such as Scikit-learn, NumPy, SciPy, Pandas and Matplotlib to extract insights, refine models and produce sound results by investigating messy information besides concluding meaningful visualizations.

TECHNICAL SKILLS

- Coding: Python, MATLAB, C, C++, SQL, Bash/Tcsh/C-Shell, Fortran 90
- Toolkit: TensorFlow, Pytorch, scikit-learn, scimage, keras, scipy/numpy, matplotlib, pandas, OpenCV, Dlib, Git, Docker, AWS
- Certificate: **[Deep Learning Specialization](#)**, **[Introduction to Deep Learning](#)**, **[Deep Learning in Computer Vision](#)**

EDUCATION

Syracuse University, **Syracuse**, **NY**, USA   08/2007 - 05/2013
Doctor of Philosophy, Experimental Medium-energy Nuclear Physics **[publication citations](#)**

PROFESSIONAL EXPERIENCES

Data Scientist (remote work)**, Flatiron School**, **New York**, **NY**, USA   05/2020 - Present
- **Face Detection Trackers - [Github](#)**
  - Designed face detection R-CNN utilizing CNN classifier trained with face box-annotated images to get **AUC** of **0.95**
  - Extracted features from pre-trained model to get descriptors for face classification with testing accuracy of **95%**
  - Implemented GAN to simulate face images and make non-smiling faces smile
- **Automatic Image Caption Generator - [Github](#) [Demo](#) [Slide](#) [Recommendation](#)**
  - Developed recurrent CNN-encoded decoder using tensorflow/keras to produce a textual description for a photo
- **COVID-19-like Viral Pneumonia Classifier - [Github](#) [Demo](#) [Slide](#) [Recommendation](#)**
  - Enhanced pneumonia classification testing accuracy from 75% up to **97%** by experimenting with CNN architectures
  - Classified viral pneumonia with testing accuracy of **91%**, precision of 86%, recall of 99%, f1 of 92% and **AUC** of **0.98**
- **COVID-19 and Safety On Wheels in Chicago - [Github](#) [Demo](#) [Slide](#) [Recommendation](#)**
  - Applied tree-based models predicting contributory factors to 4 injury severity scores amid COVID-19 car accidents
  - Increased injury severity score (0, 1, 2, 3) classification testing accuracy from 68% to **96%** together with precision of 99% (0), 98% (1), 95% (2), 89% (3), recall of 90% (0), 98% (1), 98% (2), 97% (3), f1 of 94% (0), 98% (1), 96% (2), 93% (3) and **AUC** of **0.97 (0)**, **0.98 (1)**, **0.98 (2)**, **0.99 (3)**

Sr. Postdoc, **Los Alamos National Lab**, **Los Alamos**, **NM**, USA   09/2018 - 03/2020
- Revamped detector calibration algorithm for data cleaning to enhance signal classification efficiency from 30+% to **(80-99)%**
- Reformed test benches reducing true negative and false positive in detector readout electronics and data acquisition system

Machine learning researcher, **National Taiwan University**, Taipei, Taiwan - **[Github](#)**   10/2016 - 04/2018
- Improved and provided business decisions by developing and designing algorithms using ROI (Region of Interest) masks in 1st and 2nd level brain image regression design matrix for object boundary detection and shape recognition in functional Magnetic Resonance Image (fMRI) data
- Utilized Matlab to perform image pre-processing and calibration analyses and manipulation of advanced statistics measures for model building

Jr. Postdoc, **Virginia Tech**, **Blacksburg**, **VA**, USA   04/2013 - 08/2016
- Collaborated with theorists to design theory-driven event generation algorithms implemented for Monte-Carlo simulations
- Supplied Insightful theory predictions increasing CNN-based particle classifier accuracy for better localization and detection

Graduate research assistant, **Syracuse University**, **Syracuse**, **NY**, USA   05/2009 - 05/2013
- Led multivariate regression analysis with substantial experiences in analyzing analog and digital electronics data and significant expertise in accounting for true negative (errors) and false positive (corrections) related to beam optics/modules in **>10MB** data