Dawnis Chow

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Experience

Data Science Fellow   **June 2018 - Present**

Insight Data Science, Palo Alto, CA

- Developed a fashion recommendation system as a consultant for Smart Fit in collaboration with a Product Manager and AI Fellow (smartfit.ai).
- Trained a convolutional autoencoder network and performed feature engineering on 10,078 fashion items resulting in a compact vector representation of visual form and style.
- Deployed Keras/TensorFlow based machine learning model to an AWS server using Flask.

Postdoctoral Research Associate   **July 2011 – June 2018**

Cornell University, Ithaca, NY

- Designed and implemented an image data pipeline with MATLAB for data streaming at hundreds of GB per minute. Resulted in a 10x size compression and 50x speedup in processing time.
- Performed k-means clustering and correlation analysis among 150,000+ neuronal activity patterns to identify motor-related brain regions.
- Developed a computer vision algorithm and interface with Python/OpenCV for tracking multiple animals in streaming video at 60 Hz (github.com/dawnis/larvalMultitrack).
- Organized a year-long collaborative effort between two labs to apply novel 3-Photon imaging technology to neuroscience. Efforts contributed to a multi-million dollar NSF NeuroNex Technology Hub award to Sciences and Engineering at Cornell.

Graduate Student Researcher   **September 2006 – June 2011**

University of California of Los Angeles, Los Angeles, CA

- Tested impact of visual scene motion and odor on motor reflexes utilizing a repeated-measures within subjects experimental design.
- Processed and analyzed time-varying signal data corresponding to subject movement in MATLAB. Applied white-noise analysis to characterize an average motion response function.
- Conceptualized and executed 6 projects resulting in publication in peer-reviewed journals.

Skills

Data	Statistics (Linear/Logistic Regression, GLMs) • PCA • Experimentation (10+ years) • Machine Learning (1.5 years) • Signal Processing • Visualization (10+ years)
Programming	Python (NumPy, Pandas, Matplotlib, Keras/TensorFlow, Flask) • MATLAB • Linux/Bash • AWS • OpenCV • SQL

Education

PhD Molecular, Cellular, and Integrative Physiology 2011   **UCLA**

MSc Statistics and Epidemiology 2006   **Chinese University of Hong Kong**

BS Biological Sciences 2004   **Stanford University**