Kaiyuan Chen

http://kychen.xyz/

Email : chenkaiyuan@ucla.edu

Mobile : +1 (424)535-6503

Education

- **University of California, Los Angeles** — Los Angeles, CA
  Bachelor of Engineering in Computer Science — *July 2016 – Present*
  GPA: 3.954/4.0
- **Qingdao Number Two Middle School** — Qingdao, China
  GPA: 4.0/4.0 — *July 2012 – June 2016*

Experience

- **BoTech** — Qingdao, China
  Software Engineer Intern — *Nov 2017 - Present*
  - **Site Enforcement Recorder Management**: Designed and built software for workstations to manage police site enforcement recorders. This project will be certified by Ministry of Public Security and applied to all site enforcement recorders in my city.
    - **SDK checking tool**: As different police site enforcement recorders have different SDKs, I wrote python scripts to check if their interfaces are valid and recorders are functioning.
    - **Data Collection**: Designed and implemented a unified interface to initialize, setup, backup, modify all site enforcement recorders. Workstations were designed to plug in one hundred recorders.
    - **Coordination with centralized database**: Sending and responding requests by http/ftp with centralized storage servers.
  - **Technologies Used**: Python, Windows Programming, Port Multiplexing, MySQL, QT in C++
- **Siemens Ltd** — Shanghai, China
  Research Assistant Intern — *May 2017 - Sept 2017*
  - **Novelty detection**: Did research and wrote paper on novelty detection on time-series data. As high-dimensional time-series data usually comes with long training time and difficulty in real-time implementations, we built a dynamic Bayesian machine by Expectation-Maximization algorithm.
  - **Time-series Correlation and Clustering**: Did research and wrote paper on correlation between different dimensions of time-series and associated p-value. Used agglomerating tree to cluster time-series data.
  - **Paper Review**: Wrote Paper reviews for other researchers in research group, which later helped organizing the paper that we wrote. I keep doing paper reviews even after I left Siemens, which are all on http://kychen.xyz/
  - **Technologies Used**: Python, Numpy, Pandas, Tensorflow, Matlab, Jupyter-notebook, Latex

Published Work

TODO: Patent, Paper

Projects

- **LSTMxWave** *Winter 2017*

  LSTMxWave is a machine learning project that explores the usage of LSTM/RNN to process time-series data such as sound waves.

  - **Autoencoder**: By constructing encoder and decoder LSTM layers, I built an autoencoder to find a better compression mechanism.
  - **Prediction**: By conditioning on previous time steps, I built a discriminative model by multi-layered LSTMs to predict waves.
  - **Novelty detection**: Both mechanisms can do novelty detection by measuring reconstruction error.
  - **Technologies Used**: Tensorflow, Numpy

- **ClassUCLA** *Winter 2017*
  - **Technologies Used**: Beautiful Soap, Python

- **Flappy bird in 3D** *Spring 2017*
  - : Built software for local workstations to manage all police site enforcement recorders of the whole city.

- **All-in or not All-in** *Summer 2017*
  - : Built software for local workstations to manage all police site enforcement recorders of the whole city.

Honors and Awards

- **First Presenter of Trilateral Leadership Summit**: Presented a bright and practical future to youth from China, South Korea and Japan.
- **Highest Distinction**: International Euclid Mathematics Contest
- **Bronze Medal**: "Cup of Hope" National Mathematics Invitational Tournament