Aaron Washington Chen, Ph. D.

San Jose, CA (open to relocation) | (978) 457 5586 | awc33@cornell.edu | Publications | LinkedIn | GitHub | Portfolio

Data scientist with 10+ years of Chemical Engineering experience in colloids and interface science applied to biomedical devices. Passionate about building collaborative infrastructure using analytical and soft skills to enable teams and continuous improvement.

DATA SCIENCE EXPERIENCE AND PROJECTS

GPAs at UW Madison: Exploration and visualization of statistics derived from GPAs from over 10 years of classes

- Create entity relationship diagram (ERD) and schema for SQL database, then extract, transform, and load (ETL) for hypothesis tests with SQL, Python, Git, Jupyter, pandas, NumPy, matplotlib

MeaLeon: A full stack webapp that uses Machine Learning (ML) and Natural Language Processing (NLP) for similarity analysis

- Scrape websites to obtain recipes, use ML and NLP to find similarities between ingredients, suggest new dishes to a user based on their favorite dishes, and present an app via Heroku and AWS S3 and EC2 deployment
- Ongoing work w/ Python, Git, Jupyter, pandas, NLTK, scikit-learn, NumPy, Flask, Heroku, BeautifulSoup, AWS S3, AWS EC2, Docker

RHCR: An ML-powered optical character recognition model that works on handwritten cursive Russian

- Contributor: refactoring code to TensorFlow 2, generate documentation, and improve model performance
- Ongoing work w/ Python, Git, Jupyter, TensorFlow, pillow, neural networks

TECHNICAL SKILLS

Python 3 | pandas | numpy | matplotlib | seaborn | scipy | scikit-learn | NLTK | prophet
Regression | Linear Algebra | Bayes Statistics | Imbalanced Data | Time Series Forecasting
PostgreSQL | Git | GitHub | AWS EC2 | AWS S3 | Heroku | HTML/CSS | Flask | Bash | Powershell | Mathematica | Matlab
Adobe Creative Cloud | DaVinci Resolve | Office | English (fluent) | Chinese (basic) | Japanese (basic)

RELEVANT PROFESSIONAL EXPERIENCE

Contributing Writer, Analytics Vidhya — 2019-PRESENT

- Write articles teaching data science, data analysis, data engineering, and machine learning techniques

Research and Teaching Assistant, *Santore Lab*, University of Massachusetts, Amherst, MA — 2009-2017

- Explored dynamic biomimetic interactions at interfaces in microfluidic devices via surface characterization & image analysis
- Initiated transition from IDL, Matlab, and R to Python stack over 3 years outside of labwork
- Provided teaching assistance covering introductory chemical engineering through senior process design
- Mentored 4 students from 4 schools via project direction and connected them with academic and research resources

Undergraduate Researcher, *Varner Lab*, Cornell University, Ithaca, NY — 2008-2009

- Collaborated to structure a model of ~500 interactions to study apoptosis via unfolded protein and stress response in Matlab

Co-Op and Intern, *Procter and Gamble*, Various Locations — 2007-2009

- Led and owned a total of 13 projects with total savings of $2.7 million across 5 sites in 3 business units
- Investigated operations and coordinated technicians, contractors, engineers, and managers to improve team alignment with easy to use and understand models, increase safety and ergonomics on production lines, and install new equipment

EDUCATION

Data Science Immersive Program, *Flatiron School,* Seattle, WA — Fall 2019

Ph. D., Chemical Engineering, *University of Massachusetts,* Amherst, MA — April 2017

- **Thesis: "Particle and Protein Behavior upon Graphene as Compared with Other Common Surfaces"**
  Fellow, Institute for Cellular Engineering (Integrative Graduate Education and Research Traineeship), Two Years

B.Sc., Chemical Engineering, Minor in Biomedical Engineering, *Cornell University*, Ithaca, NY — May 2009

- American Institute of Chemical Engineers Student Chapter Vice President, Class Representative, and Historian

LEADERSHIP & CERTIFICATIONS

Founder and Photographer, *Composed and Focused Studios*, San Francisco Bay Area — 2018-PRESENT

- Provide photography/ videography services and utilize experience and skills to teach data science

Certificate of Achievement, Business Foundations Series for Scientists and Engineers — Summer 2014

- Selected for inaugural group of scientists to learn business fundamentals with Isenberg School of Management

Certificate in Cellular Engineering — 2013

- Completed multidisciplinary effort in ethics, biochemistry, polymer science, and immunology with researchers of other fields

Chemical Engineering Graduate Society, *Welcoming Committee*, University of Massachusetts Amherst — 2010-2017