Alex Chen

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Education

University of California Los Angeles — *Los Angeles, California*

3rd year PhD student in Statistics — *Expected Graduation Date: June 2025*

GPA: 4.0/4.0

The Pennsylvania State University — *University Park, Pennsylvania*

Double Major in Statistical Data Science and Applied Statistics — *Graduation Date: May 2020*
Double Minor in Math and Korean
Overall GPA: 3.83/4.0
Dean's List: 2017, 2018, 2019, 2020

Skills

Programming	Python, R, SQL, SAS, Java
Statistical Techniques	Causal Inference, Machine Learning, Computer Vision, Deep Learning, Data Visualization Data Management, Database Design, Web Scraping
Notable Graduate Classes Taken	Large Sample Theory, Machine Learning, Monte-Carlo Optimization Theoretical Statistics, Modeling and Learning, Matrix Optimization

Industrial Internship Experience

Data Science Internship — *Denver, Colorado*

Machine Learning and IoT Internship at Lockheed Martin — *May 2019 - Aug. 2019*

- Self-taught Causal Inference through R to accelerate autoclave fault identification sources
- Performed fault detection to do predictive maintenance through R and Python on large machinery to minimize downtime

Data Science Internship — *Redmond, Washington*

Genie Aerial Work Platforms — *June 2021 - Sept. 2021*

- Created dashboards for data analytics through Amazon Quicksight and use of Amazon Redshift to live-track potential machine faults from sensor data
- Identified new machine usage metrics for additional business insights on how customers use products
- Used SQL to continuously pull and merge data from AWS databases for live dashboards

Research Experiences

PhD Research — *Los Angeles, California*

UCLA Causality Gaussian DAGs from Network Data with Dr. Qing Zhou — *June 2021 - Present*

- NSF funded research on causal inference estimation of Gaussian graphs involving discrete network data
- Developing algorithms to improve estimation and structure accuracy over current causal inference methods

Penn State Undergraduate Statistics Researcher — *University Park, Pennsylvania*

Penn State Eberly College of Science with Dr. Lingzhou Xue — *Jun. 2018 - May 2020*

- Collaborated with bioinformaticians on Hi-C Gene expression data using Lasso on high-dimensional data to identify and differentiate between distinctive chromatins for normal and cancer cells. Hi-C analysis costs 1000s of dollars. Model can be used estimate interaction intensity between chromosomes as a decent substitute for costly analysis
- Compared classification methods using semi-supervised learning for sentiment analysis of Amazon Review Text

Honors & Awards

2019 **Patil-Taillie Award,** Awarded to one undergraduate student annually who has demonstrated forethought and application of the use of statistics in the study of the environment. Published research on significant changes in chemical pollutants and spills within Pennsylvania water networks

2018 **PSU DataFest,** Won 1st Overall and awarded Best Insight in the annual DataFest Competition using Indeed data to discover profitable professions based on cost of living in the United States. Used Tableau for data visualization using outside data sources.

2019 **PSU DataFest,** Won Best Insight in the annual DataFest Competition using movement data for rugby teams to determine effectiveness of self-reporting mental and health state