

Suat Akbulut, Ph.D.

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EXPERIENCE

Associate Quantitative Analyst

Goldman Sachs

📅 Aug 2022 – Apr 2023

📍 New York, NY

As part of the Prime Portfolio Strats team in the Prime Business department, I calculated margin requirements for large hedge funds using stress-based models. This involved analyzing complex scenarios and making informed decisions to manage risk as well as performing back-testing. I contributed to process improvement initiatives and collaborated with cross-functional teams. I produced client reports with visualizations for risk monitoring, and communicated complex margin methods to non-technical stakeholders.

Data Scientist

Billups

📅 June 2021 – July 2022

📍 State College, PA (Remote)

Developed Databricks-based workflow to reduce computation time and errors for geospatial data processing, created A/B testing frameworks for evaluating model quality, designed a blockchain-based, privacy-centric app to collect geospatial data for out-of-home advertising, and optimized Spark code for attribution calculation.

Graduate Assistant

Pennsylvania State University

📅 Aug 2015 – Dec 2020

📍 University Park, PA

Taught Microeconomics and Money & Banking to over 60 college-level students, served as a teaching assistant for Economics & Law and Game Theory courses for over 100 college-level students, where I delegated responsibility to graders, and a grad-level Econometrics course for over 30 students.

SELECTED PROJECTS

📷 **Picture This** <https://picturethis.herokuapp.com>
Takes a user-provided photo and creates a story out of it. Employs a YOLO3 object detection model to identify the objects in the photo, then utilizes writesonic (ChatGPT-like) API to create a story.

🚗 **Used Cars** <https://usedcars.herokuapp.com>
Asks the user to provide the basics of a car and displays the car's photo, reviews, complaints, and estimated asking price on craigslist.com as well as the price distribution across different states on the U.S. map.

PUBLICATIONS

📖 Books

• Akbulut, S. (2021). *Essays on value distributions in all-pay auctions*. Pennsylvania State University. Retrieved from <https://books.google.com/books?id=HiySzgEACAAJ>

📄 Journal Articles /& Conferences

- Ryoo, J., Gudukbay Akbulut, G., Jiang, H., Tang, X., Akbulut, S., Sampson, J., Narayanan, V., & Kandemir, M. (2023). Mlam: A machine learning-aided architectural bottleneck analysis model. *Manuscript submitted for publication*.
- Ozdemir, A., Akbulut, S., Alrizah, M., & Choi, K. (2020). High-speed tiq flash adc designing tool with supervised learning. *Manuscript submitted for publication*.
- Akbulut, S., & Yilmaz, M. (2015). A dynamic model of mixed duopolistic competition: Open source vs. proprietary innovation. *Theoretical Economics Letters*, 5(06), 730.

EDUCATION

Ph.D. in Econometrics and Quantitative Economics

Pennsylvania State University

📅 Aug 2015 – May 2021

M.A. in Economics

Bogazici University

📅 Sept 2013 – June 2015

B.A. in Economics

Bogazici University

📅 Sept 2007 – June 2012

SKILLS

Python SQL C++ MATLAB HTML
Bash LaTeX Stata PySpark Pandas
NumPy Scikit-Learn GitHub PyTorch
Matplotlib Seaborn Bokeh Altair Plotly
Keras TensorFlow PyTorch Neural Networks
Random Forest SVM NLP CNN RNN
Unsupervised Learning Clustering PCA
Time-series Analysis Statistics Econometrics
Game Theory Financial Services Stress Model
Risk Geospatial Data Analysis Auction Theory

HONORS & AWARDS

🏆 Achievements

- 2014 - Murat Sertel Award (For the best-performing student in their graduate studies)
- 2012 - Honor Certificate (Bogazici University)

🏆 Mathematic Olympiads

- 2007 - 2nd Place in National Research Competition in Mathematics
- 2005 - Silver Medal in National Mathematics Olympiads
- 2005 - Bronze Medal in Akdeniz University Mathematics Olympiads
- 2004 - Bronze Medal in Akdeniz University Olympiads

🌟 Certifications

- Deep Learning Specialization by DeepLearning.ai - Instructor: Andrew Ng
- Machine Learning by Coursera - Instructor: Andrew Ng
- Programming in C++: A Hands-on Introduction by Codio