

Luke Wortsmann

Chicago, IL

+1 847 917 8130
lawortsmann@gmail.com
lawortsmann.com

Experience

Current
May 2021

OTT Risk

Data Scientist

OTT is a venture backed startup using machine learning to offer parametric business interruption insurance.

Projects & Responsibilities:

- Structured parametric policies, identified and developed indices, and collaborated with clients and other stakeholders to efficiently transfer novel risk.
- Developed pricing and risk models using Stan and PyTorch, presented and defended these models to various reinsurers and capacity providers. Managed data processing and model training pipelines.
- Built APIs to deliver pricing and policy terms using FastAPI, and dashboards monitor program risk levels using Dash and Plotly, then deployed these to Google Cloud Platform.

2017 - 2021
Northbrook, IL

SBB Research Group

Tactics Associate

SBB is a quantitative hedge fund based in the suburbs of Chicago.

Projects & Responsibilities:

- Coordinated research, risk-management, and trading of a large portfolio of OTC derivatives.
- Built complex valuation and risk management tools from the ground up based on local and stochastic volatility models using Python, C, and Flask.
- Developed proprietary market signals based on large fundamental and alternative datasets, with TensorFlow, SQL, and R.
- Designed and managed algorithmic trading strategies for equities, equity options, and exotic derivatives.
- Led project management of a team of software engineers and multiple stakeholders across the firm to implement internal tools and trading strategies.
- Trained interns and full-time employees in the Tactics (quantitative research) department.

Summer 2016
Chicago, IL

KCG Holdings

Quantitative Trading Intern

KCG was a global high frequency trading firm and market maker.

Projects & Responsibilities:

- Researched proprietary trading signals using machine learning and Bayesian methods.
- Analyzed massive complex datasets using Python, Vertica, and Scikit-Learn.
- Collaborated with traders and other interns on the US equities desk.

2014 - 2017
Urbana, IL

Center for Complex Systems Research

Student Researcher

CCSR is an interdisciplinary research group based in the physics department at UIUC.

Projects & Responsibilities:

- Utilized Mathematica to model the Coulomb blockade in nanocapacitors, resulting in a publication.
- Participated in weekly meetings with Dr. Alfred Hubler and an interdisciplinary research team.

Education

2014 - 2017
Urbana, IL

College of Engineering **University of Illinois Urbana-Champaign**

Bachelor of Science Physics | Minor Mathematics

3.71 / 4.00 GPA. Degree completed in three years.

Awards: James Scholar, Dean's List

Course work in: Numerical PDEs, Differential Geometry, and Probability Theory

Publications

March 2018

Large energy density in three-plate nanocapacitors due to Coulomb blockade.

Journal of Applied Physics

with Alfred Hubler, S. Foreman, and J. Liu

Worked with Dr. Hubler to develop theory, ran simulations in Mathematica, and drafted the paper.