

Luke Wortsmann

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Experience

Current April 2021	OTT Risk <i>Data Scientist</i> <i>OTT is a startup co-founded by David Soloff and Chamath Palihapitiya using machine learning to offer parametric NDBI insurance.</i> Projects & Responsibilities: <ul style="list-style-type: none">▪ Developing policy pricing and risk-management infrastructure.
2017 - 2021 Northbrook, IL	SBB Research Group <i>Tactics Associate</i> <i>SBB is a quantitative hedge fund based in the suburbs of Chicago.</i> Projects & Responsibilities: <ul style="list-style-type: none">▪ Coordinated research, risk-management, and trading of a large portfolio of OTC derivatives.▪ Built complex valuation and risk management tools, based on local and stochastic volatility models, using Python, Cython, and Flask.▪ Developed proprietary market signals, based on large fundamental and alternative datasets, using TensorFlow, MySQL, and Airflow.▪ 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 complex internal tools and trading strategies.▪ Trained interns and full-time employees in the Tactics (quantitative research) department.
Summer 2016 Chicago, IL	KCG Holdings <i>Quantitative Trading Intern</i> <i>KCG was a major, global high frequency trading firm and market maker.</i> Projects & Responsibilities: <ul style="list-style-type: none">▪ Researched proprietary trading signals using statistical and machine learning 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 <i>Student Researcher</i> <i>CCSR is an interdisciplinary research group based in the physics department at UIUC.</i> Projects & Responsibilities: <ul style="list-style-type: none">▪ 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 <i>Bachelor of Science Physics Minor Mathematics</i> 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
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Publications

March 2018	Large energy density in three-plate nanocapacitors due to Coulomb blockade. <i>Journal of Applied Physics</i> with Alfred Hubler, S. Foreman, and J. Liu Worked with Dr. Hubler to develop theory, ran simulations in Mathematica, and wrote the majority of the paper.
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