Chris Rockwell

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Education

University of Michigan (College of Engineering) — Ann Arbor, MI
Master of Science, Computer Science and Engineering — Sep. 2018 - May 2020
- GPA: 4.00/4.00 | GRE Quantitative: 170/170
- Advisors: David Fouhey, Jia Deng

University of Michigan (College of Literature, Science and Arts) — Ann Arbor, MI
Bachelor of Science, Economics, Magna Cum Laude — Sep. 2011 - May 2015
Minors in Computer Science and Mathematics
- GPA: 3.95/4.00

Interests

Computer Vision, Machine Learning

Research Experience

Fouhey AI Lab (FAIL) — Ann Arbor, MI
Graduate Research Assistant | Advisor: David Fouhey — May 2019 - Present
3D Single Person Human Pose Estimation

Princeton Vision and Learning Lab (Formerly Michigan VLL) — Ann Arbor, MI
Graduate Research Assistant | Advisor: Jia Deng — May 2018 - May 2019

2D Single Person Human Pose Estimation
- Improved *Stacked Hourglass* score from 90.9% to 91.3% on MPII using better regularization
- Used bottleneck-to-attention mechanism with regularization to improve 2HG performance 0.7%
- Increased precision of network confidence, explored utilizing for curriculum sampling of tail cases

Meta-Learning
- Enhanced fine-tune model on *Meta-Dataset* to within 0.1 *avg. rank* of meta-learning benchmark

Strategic Reasoning Group — Ann Arbor, MI
Undergraduate Research Assistant | Advisor: Michael P. Wellman — May 2013 - Jul. 2013
Agent-based simulation of High-Frequency Trading and Latency Arbitrage

Professional Experience

Citadel LLC — New York, NY
Trader, Global Fixed Income (Core Team) — Apr. 2017 - Oct. 2017

Assisted Portfolio Manager (PM) and Head of Fund in managing risk and generating trade ideas
- Built various screeners and monitors using pandas to pitch linear relative value trades in G10 rates
- Led research for and managed regression-based statistical arbitrage trading strategy

Designed and implemented tools to better construct and manage PM and Head of Fund's portfolio
- Constructed custom clustering algorithm to view trades in an elegant manner
- Wrote script using scipy to optimize portfolio Sharpe ratio subject to constraints

BNP Paribas — New York, NY
Interest Rates and FX Structuring Analyst (Intern in summer 2014) — Jul. 2015 - Mar. 2017

Priced, modeled and executed exotic and bespoke products
- Created pricing models and back-tested performance of bespoke structures using Python
- Co-managed $1bn inflation-linked TRS: extended pricing models, priced and executed hedges

Created and analyzed systematic hedging strategies and trade ideas
- Engineered framework to measure risk on a portfolio basis and evaluate hedging strategies using multiple factors, used this to help redesign hedging program of a top 10 company by market cap

Honors & Awards

University of Michigan — Ann Arbor, MI

Research Experience for Undergraduates Award	2013
James B. Angell Scholar	2013, 2014, 2015, 2016
William J. Branstrom Freshman Prize	2012
University Honors	2011,2012,2013,2014,2015
Phi Kappa Phi Honors Society	2015

Teaching & Activities

Grader: EECS 598 Deep Learning
Technical Mentor: mentoring one undergraduate with Prof. Fouhey, mentored two interns at BNP
Academic Mentor: mentored two undergraduate CSE students, master's orientation panelist
Graduate Student Advisory Committee: represent CSE MS students to improve graduate experience

Salient Courses

University of Michigan, MS:
Machine Learning: replicated and improved validation accuracy on *Stacked Hourglass Networks*
Advanced AI: replicated *Image Generation from Scene Graphs* and extended evaluation to use VQA
Self-Driving Cars: fine-tuned *Squeeze and Excitation ResNet* for road-side classification
Advanced Data Mining: performed link prediction using *SDNE* on sparse, temporal graphs
Deep Learning for Computer Vision (no class project)

University of Michigan, BS:
Artificial Intelligence, Linear Algebra, Numerical Methods, Econometrics, Real Analysis, Data Structures and Algorithms

Last Updated 3 Oct 2019