ADAM HAMDEN

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EDUCATION

University of Southern California *August 2018 - May 2022*
Master of Science in Computer Science, Viterbi School of Engineering GPA: 4.00
Bachelor of Science in Computer Science, Viterbi School of Engineering GPA: 3.97

- USC Trustee Full Tuition Scholarship (top 2% of incoming class)
- PhD-level Courses: Advanced Analysis of Algorithms, Advanced Natural Language Processing

South Pasadena High School, South Pasadena *August 2014 - June 2018*
Class Valedictorian GPA: 4.00

EXPERIENCE

USC Robotics Researcher, Interaction Lab (Dr. Maja Matarić) *December 2018 - Present*

- Researched real-time methods for empathy and disclosure modelling for SAR (Socially Assistive Robotics) interactions that used multimodal and text based machine learning approaches under direct advising by Dr. Maja Matarić.
- Designed analysis pipeline for remote cognitive behavioral therapy interactions that included heart rate detection over live Zoom video through photoplethysmography.
- Deployed topic-based SQL logger onto the Python Package Index where it has received 5,500+ downloads.
- Led development of device-free dynamic projector interaction system using depth cameras to extract skeletal pose and RANSAC for surface planar segmentation.

Corporate Treasury Strats Intern, Goldman Sachs *June 2021 - August 2021*

- Extended FTP (Funds Transfer Pricing) Model for what-if sensitivity analysis of non-maturity and term deposit products with on-graph execution using the proprietary risk management language, Slang.
- Overhauled legacy pro-forma topsheet tool with extensible user-interface that provides ability to customise model inputs.
- Interfaced directly with internal business side users on the incentives team to better understand their needs and use cases when leveraging the what-if analysis tool developed for the FTP model.

Global Wealth Management Intern, Merrill Lynch (The Hartl Group) *June 2020 - March 2021*

- Performed dimensionality reduction through Principal Component Analysis (PCA) on 15-years of MSCI factor index and economic data to highlight the strong influence of the former on factor index variance.
- Developed a tool to canvas internet news to generate new client leads by identifying money movements coupled with major life events allowing us to capitalize with a first mover advantage in approaching potential clients.
- Compiled a slide deck detailing the premise of ESG and Impact Investing with a review of investment opportunities available to clients from ETFs to custom ESG strategies to reflect a philanthropic investment mandate.

ACTIVITIES

Algorithms and Theory of Computing, Head TA *August 2019 - Present*

- Managed course staff for undergraduate algorithms course including arranging office hour sessions, collaborating with professors on assignments, and assessment creation.
- Enhanced student learning experience by hosting a clinic session where lecture concepts were reinforced and students were able to engage in a guided, meaningful discussion of material.

Hesiod Financial, Portfolio Manager *January 2020 - Present*

- Conducted company analysis through DCF valuation and peer evaluation in the consumer goods and healthcare sector.
- Formulated investment strategies that cater to the fund's risk appetite through options beyond long/short equity positions.

SKILLS

Languages: Python, C++, C, Java, HTML/CSS, JS
Development: PyTorch, Robotic Operating System (ROS), NumPy, SciPy, Git, MySQL, SQLite, AWS

ACADEMIC PROJECTS

Advanced Natural Language Processing *August 2021 - December 2021*

- Took PhD level course on advanced NLP including an exploration into the state-of-the-art through journal paper reading.
- Reproduced and expanded work on orthogonal constraints in structural probes for BERT embedding interpretability.