Kai Wen Cui

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Languages: English, Italian, Chinese
Nationality: Italy

Recent graduate with a strong quantitative background, actively seeking quantitative roles
Results-driven with a strategic, long-term perspective, eager to contribute in a collaborative team environment
Personal philosophy: "Life is an optimization problem with unconstrained variables and dynamic objective functions"

EDUCATION

Cornell University, Ithaca, NY — Aug 2023 - May 2024
- *M.Eng. in Computer Science*
- Relevant coursework: Advanced Artificial Intelligence, Advanced Database Systems
- Academic enrichment at Cornell SC Johnson College of Business

Polytechnic University of Milan, Milan, Italy — Sep 2018 - Sep 2022
- *B.S. in Engineering of Computing Systems (Computer Science)*

ACADEMICS & RESEARCH

Input Compression Strategies for Efficient LLM Inference, Cornell University — Feb 2024 -
- Investigating efficient methods for minimizing Large Language Model (LLM) inference costs while maintaining optimal performance. Conducting extensive experiments on benchmark datasets to validate the effectiveness of these approaches. Project conducted under the guidance of Prof. Immanuel Trummer

Dynamic Attendee Visibility for Improved Hybrid Interactions, Cornell University — Feb 2024 -
- Developing and contributing to a novel Zoom video conferencing experience for hybrid meetings, featuring dynamic attendee subgrouping to enhance interaction between in-person and remote participants. Collaborated with Ph.D. Xiaoyan Li under the guidance of Prof. Susan R. Fussell

Adversarial Attack Testing Framework, Polytechnic University of Milan — 2022
- Developed a flexible and robust framework to test black-box adversarial attacks in three-dimensional space; Enhanced adversarial attack testing framework by refactoring internal interfaces, enabling more complex operations and improved functionality; Implemented support for COCO 1.0 annotations to expand the framework's compatibility with diverse datasets; Designed an assisted polygon annotation tool for custom datasets using Mask R-CNN, streamlining the data annotation process. Collaborated with Ph.D. Loris Giulivi under the guidance of Prof. Giacomo Boracchi

EXPERIENCE

Data Scientist Intern, *ARECneprix*, Milan, Italy — Oct 2022 - Mar 2023
- Developed quantitative models for distressed debt real-estate portfolio valuations, leveraging statistical techniques and machine learning algorithms, enabling accurate and data-driven assessment of asset values. Built and maintained proprietary Python libraries to streamline large-scale document processing and analysis, significantly reducing manual effort and improving efficiency
- Collaborated with cross-functional teams to integrate the developed models and libraries into the existing infrastructure, ensuring seamless adoption and optimized performance. Conducted regular model validation and performance monitoring to maintain accuracy and reliability

Data Analyst Intern, *Deloitte Risk Advisory*, Milan, Italy — Nov 2021 - May 2022
- Developed Robotic Process Automation (RPA) and Business Intelligence (BI) solutions to drive digital transformation and business modernization initiatives. Worked with large-cap companies and stakeholders to improve processes, enhance efficiency, and enable data-driven decision-making

SELECT PROJECTS

Automated Securities Trading System, *happy to discuss more* ☕ — Jan 2023 -
- Developed and launched an automated securities trading system for personal investments, utilizing ensemble methods strategies, including long-short equity, mean reversion, and statistical arbitrage
- Developed a modular and highly-customizable Python backtesting framework for robust analysis and evaluation of trading strategies using historical data
- Integrated real-time stock data from APIs and executed trades through broker interfaces

VHDL-based Image Histogram Equalization Hardware Component, Polytechnic University of Milan 2020
- Designed and implemented a VHDL-based hardware component for efficient image histogram equalization. Final grade: 30/30

C-based Text Editor, Polytechnic University of Milan 2019
- Engineered a highly efficient text editor in C, inspired by the classic "ed" editor, optimizing space and time complexity to meet stringent performance requirements. Final grade: 30L/30 (full marks with honors)

LEADERSHIP & SERVICE

Venture Capital Associate, *Big Red Ventures*, Cornell University Oct 2023 -
- Evaluated AI startups and provided targeted guidance to drive technological innovation and business growth, leveraging expertise in artificial intelligence and entrepreneurship
- Performed market research, financial analysis, and due diligence to provide actionable insights and recommendations, guiding strategic decisions and growth initiatives for portfolio companies to optimize performance and achieve objectives

President, *PoliMi Data Scientists*, Polytechnic University of Milan Nov 2019 - Mar 2022
- Lead one of the largest student-run association at the Polytechnic University of Milan
- Restructured team organization, launched monthly newsletter, and maintained positive cash flow for reinvestment. Managed legal status and cultivated partnerships with professors, companies, and student organizations
- Themed events and workshops related to Data Science and ML are organized periodically

MISCELLANEOUS

Natural Language Processing, *Tsinghua University*, China (remote). Mar - Jun 2021
- Selected among a competitive pool of students to participate in the Natural Language Processing graduate course at Tsinghua University as part of the GLOBAL MOOC ALLIANCE initiative between Tsinghua University and Polytechnic University of Milan.

Research Collaborator, **Logic Programming**, *Università di Ferrara*, Ferrara, Italy 2018 - 2019
- Worked on hyperparameters optimization with the Machine Learning Lab at the University of Ferrara under the guidance of prof. Fabrizio Riguzzi. Granted access to the CINECA supercomputer. Awarded travel grant by AI*IA (Italian Association for Artificial Intelligence) to two major Inductive Logic Programming conferences (PLP 2018, ILP 2018), and a workshop (ACAI 2018) for early distinguished participation in AI research.

PROGRAMMING SKILLS

Experienced with *Python* (including *PyTorch*, *Pandas* and *Numpy*), *C* (for high performance code), *SQL*/*NoSQL*, LaTeX, Git
Familiar with *Java*, *Javascript*, *Node.js*, *React.js*, *HTML*, *CSS*