Julian Asilis

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U.S. citizen

Education

2022 – **Ph.D. in Computer Science**, *University of Southern California*, Los Angeles.

Advisor: Vatsal Sharan
Research interest: Theoretical machine learning.

2016 – 2020 **A.B. in Mathematics with High Honors**, *Harvard University*, Cambridge, MA.

Senior Thesis: Probability Monads, under Michael Hopkins.
Graduate coursework: Algebraic Topology, Commutative Algebra, Machine Learning, Probability.

Research

Computable PAC Learning of Continuous Features.
Nathanael Ackerman, Julian Asilis, Jieqi Di, Cameron Freer, and Jean-Baptiste Tristan. In *Logic in Computer Science (LICS)*, 2022.

On the Computable Learning of Continuous Features.
Nathanael Ackerman, Julian Asilis, Jieqi Di, Cameron Freer, and Jean-Baptiste Tristan. In *Conference on Computability and Complexity in Analysis (CCA)*, 2021.

Experience

June 2021 – June 2022 **Research Associate**, *Boston College*, Chestnut Hill, MA.

- Researched computable learning theory, contributing to the publication and presentation of an extended abstract at CCA and a paper at LICS.
- Researched topological measures of complexity for neural networks, including training and analyzing 10k+ nets, and designing and implementing an efficient algorithm for computing polyhedral decompositions of deep nets.
- Assisted in the advising of an undergraduate mathematics thesis on RKHS.
- Served as TA and Head TA for 2 computer science courses, including writing 140 pages of notes, overseeing 7 TA's, and writing scripts for automated exam grading.

July 2020 – May 2021 **Quantitative Research Analyst**, *AQR Capital Management*, Greenwich, CT.

- Refined and expanded several factors used to trade dozens of assets in fixed income.
- Delivered multiple 60-minute research presentations to senior quants and partners.
- Performed inference and time series modeling on data sets of 1M+ observations.
- Wrote production code in Python and SQL.

Summer 2019 **Research Summer Analyst**, *AQR Capital Management*, Greenwich, CT.

- Completed 10-week research project studying macroeconomic signals for the fixed income group, including extensive signal testing in Python.
- Delivered findings to partners through a 60-minute presentation.

Teaching

At Boston College:

- *CSCI 1101: Computer Science I* (Fall 2021 Head Teaching Assistant)
- *CSCI 3340: Introduction to Machine Learning with Applications to Chemistry* (Fall 2021 Teaching Assistant)

At Harvard:

- *Math 101: Sets, Groups, and Topology* (Spring 2020 Course Assistant)
- *Math 112: Real Analysis I* (Spring 2019 Course Assistant)
- *Math 122: Abstract Algebra I* (Fall 2018 Course Assistant)

Community

Summer 2023 **SHINE Mentor**, *USC Summer High School Intensive in Next Generation Engineering (SHINE)*, Los Angeles, CA.

2019 – 2020 **Math Mentor**, *Harvard Gender Inclusivity in Mathematics (GIIM)*, Cambridge, MA.

2018 – 2019 **Teaching Assistant**, *Cambridge Math Circle*, Cambridge, MA.

Skills

Programming: Python, SQL
Languages: English, Spanish