Julian Asilis

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U.S. citizen

Education

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

2016 – 2020 **A.B. in Mathematics with High Honors**, Harvard University, Cambridge, MA.
Senior Thesis
Probability Monads, written under Dr. Michael Hopkins. Earned High Honors after written and oral thesis examination.
Selected Coursework
Mathematics: Honors Linear Algebra and Real Analysis I & II, Complex Analysis, Abstract Algebra I & II, Category Theory, Graduate Algebraic Topology, Graduate Commutative Algebra.
Computer Science: Artificial Intelligence, Data Structures & Algorithms, Graduate ML.

Research

Throughout, author names are ordered alphabetically.

Computable PAC Learning of Continuous Features.
Nathanael Ackerman, Julian Asilis, Jieqi Di, Cameron Freer, and Jean-Baptiste Tristan. Accepted 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 full-length publication 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 aiding in automated grading of exams.

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.

Summer 2018 **Guided Study**, University of Miami, Miami, FL.
- Studied representation theory under Dr. Dvorsky of the University of Miami, covering 20 chapters of *Representations and Characters of Groups.*

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

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

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

Skills

Python, SQL, LaTeX; Spanish.