

Muyan Jiang

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EDUCATION

New York University, Abu Dhabi

Abu Dhabi, UAE

Bachelor of Science in Mathematics, Computer Science — GPA: 4.0/4.0

Aug. 2018 – May 2022

Relevant Courses: Scientific Computing, Deep Learning, Advanced Stats, Topology, NLP, Algo for Data Sci, SWE

INTERNSHIPS AND RESEARCH

Microsoft's Software Technology Center of Asia

June 2021 – Aug. 2021

Software Engineering Intern

Suzhou, China

- Developed a sport news multilabeling model for Bing's downstream ranking system, for use during Tokyo Olympics, using graphical knowledge databases and structured neural networks with 100ms latency and 90%+ accuracy

Covid-19 Epidemiological Research

May 2020 – Apr. 2021

Researcher

Abu Dhabi, UAE

- Simulated COVID-19 pandemic using the SEIR-model to suggest an optimal policy for the UAE to balance trade-offs between in-person classes and the spread of the virus, with tools from Mathematica and MatLab
- Co-authored a paper on the eluding effect of school opening that mathematically explained the ambiguous role of school opening policy during the COVID-19 outbreak and the existence of a threshold of phase transition

Covid-19 Literature Classification with Termolator

Dec. 2020 – May 2021

Researcher

Abu Dhabi, UAE

- Developed a tailoring COVID-19 document classification algorithm with a novel termolator technique and boosted F1 Micro measure to 80% with SVC on squared hinge loss
- Published and presented report at the 2021 IEEE MIT Undergraduate Research Technology Conference

Matrix Analysis

May 2020 – Present

Researcher

Abu Dhabi, UAE

- Computed numerical range generating polynomial for low dimensional reciprocal matrices with Mathematica
- Discovered criteria of ellipticity of low dimensional reciprocal matrices via the computation of Kippenhahn curve
- Presented a report "Kippenhahn Curve of Some Reciprocal Matrices" at AMS/MAA's Joint Mathematics Meeting

Lie Algebra

Jan. 2019 – Apr. 2020

Summer Undergraduate Researcher

Abu Dhabi, UAE

- Studied double extensions of restricted Hamiltonian Lie superalgebras preserving the non-degenerate closed 2-forms in characteristic p with non-constant coefficients with a forthcoming report
- Computed filtered deformations of exceptional (Skryabin) modular Lie algebras over algebraically closed fields of characteristic 3 in the restricted case, using "SuperLie" package from Mathematica and Python.

PROJECTS

Aunties Assemble

Sept. 2020 – Jan. 2021

Project Manager / Developer

Abu Dhabi, UAE

- Developed and tested a peer-to-peer public food ordering platform for unemployed expats in the MENA area
- Implemented back end database with MongoDB Atlas, front end with JavaScript, HTML, and CSS

China-Gulf Forum: Opportunities and Challenges

Jan. 2019 – Present

Co-founder

UAE/China

- Founded the first student-organized multidisciplinary conference in the UAE that aims to address the changing multilateral relationship between China and the Gulf region
- Hosted annual forums for three years and invited international and local leaders including former UN special representative Bernardino León, and Chairwoman of UAE COVID-19 Management Committee Nawal Al Kaabi

PUBLICATIONS AND PRIZES

M. Jiang and I. M. Spitkovsky, "On some reciprocal matrices with elliptical components of their kippenhahn curves," *Special Matrices*, vol. 10, no. 1, pp. 117–130, 2022

M. Jiang, R. Fan, and O. Hussein, "Document classification with termolator for covid-19 literature," in *2021 IEEE MIT Undergraduate Research Technology Conference (URTC)*. to appear.

A. Gandolfi, A. Aspri, E. Beretta, K. Jamshad, and **M. Jiang**, "A new threshold reveals the uncertainty about the effect of school opening on diffusion of covid-19," *arXiv preprint: 2104.04136*, 2021

Honourable Mention – 2020, 2019 International Mathematics Competition in Bulgaria

TECHNICAL SKILLS

Languages: Python, C/C++, C#, Scope, JavaScript, HTML/CSS, Mathematica, MatLab

Developer Tools: Google Cloud Platform, VS Code, Jupyter Notebooks, PySpark

Libraries: Pytorch, Keras, pandas, scipy, sklearn, NLTK, BeautifulSoup, seaborn