

curriculum vitae of
Haider Riaz Khan

🏠 haiderriazkhan.com ✉ haiderriazkhan@gmail.com
in haider-khan-57593aba 🌐 haiderriazkhan

EDUCATION

2024 – Pres	M.S. in Mathematics Courses: Modern Algebra and Computational Mathematics	CITY COLLEGE OF NEW YORK
2017 – 2018	M.A. in Philosophy Thesis: The Phenomenological Origins of Property (Advised by John Turri) Seminars: Self-Knowledge, Human & Computer Intelligence, and Foundations of Quantum Theory	UNIVERSITY OF WATERLOO
2010 – 2015	B.Sc. in Physics and Computer Science Special Research Project: The Building of a Cellular Detector (Advised by Paul François)	MCGILL UNIVERSITY

PUBLICATIONS

CONFERENCE AND JOURNAL ARTICLES

1. **Khan, Haider Riaz**, & John Turri. “Phenomenological Origins of Psychological Ownership.” *Review of General Psychology* 26, no. 4 (December 2022): 446–63.
2. Li, Nan, Yu Lei, **Haider R. Khan**, Jingshu Liu, and Yun Guo. “Applying Combinatorial Test Data Generation to Big Data Applications.” In *Proceedings of the 31st IEEE/ACM International Conference on Automated Software Engineering (ASE ’16)*, 637-47. New York, NY: Association for Computing Machinery, August 2016.

ESSAYS

1. “The Forever War.” *Commune*, Issue 5, Winter 2020.

AWARDS & HONORS

2018	Paul Seligman Memorial Scholarship	UNIVERSITY OF WATERLOO, \$1200
2015	Dean’s Multidisciplinary Undergraduate Research List	MCGILL
2014	NSERC-CREATE Neuroengineering Award	MCGILL, \$5,625
2010	Alexander Rutherford Scholarship	WESTERN CANADA HIGH SCHOOL, \$2,500

WORK

2024 - Pres	Software Engineer Wrote GraphQL APIs and built out the application logic for delivering data insights—including computing student level data, aggregate statistics, and advanced features such as differentially private statistics. Created fast, efficient and secure data pipelines that power the backend systems.	BASE EDUCATION (NYC, USA)
2022 - 2023	Staff Software Engineer Integrated multiple centralized digital exchanges into Terrace’s liquidity platform using a FIX API solution. Worked with Circle REST API suites to enable global payments, withdrawals, and trades using USDC.	TERRACE (NYC, USA)
2021 - 2022	Senior Software Engineer Implemented Avenue 8’s observability infrastructure. Wrote automation, monitoring, and alerting scripts. Automated the management of AWS provided resources using Terraform. Improved network security.	AVENUE 8 (NYC, USA)
2019 - 2021	Software Engineer Built Lifion’s graph database framework using a microservices architecture, Node.js, Gremlin, and distributed message queuing services. Wrote optimized Gremlin queries and SQL subroutines.	LIFION BY ADP (NYC, USA)

2018	Translator	PHILOSOPHICAL SCIENCE LAB, UNIVERSITY OF WATERLOO
	Translated English stimuli into Pashto and Urdu for the purposes of a cross-cultural study of the “ought implies can” principle. Provided feedback on research paper drafts to Prof. Turri.	
2016 - 2017	Software Engineer	MEDIDATA SOLUTIONS (NYC, USA)
	Contributed to the development of a Java based combinatorial test data generator called BIT-TAG.	
2014 - 2015	NSERC Neuroengineering Fellow	RUTHAZER LAB, MONTREAL NEUROLOGICAL INSTITUTE
	Wrote CANDLE-J; an open-source 3-D image denoising software designed as an ImageJ plugin. CANDLE-J is adept at processing deep in vivo 3D multiphoton microscopy images where the signal to noise ratio (SNR) is low. It is written in Python, Java, and multithreaded C.	
2012 - 2014	Computational Scientist	COOK LAB, DEPARTMENT OF PHYSIOLOGY, MCGILL
	Developed MATLAB routines to measure the cross-correlation of microsaccades and microstimulations (in area MT of the visual cortex). Created a library of MATLAB functions to compute joint metrics of neural activity. The joint metrics are computed for both single unit and multi unit neuronal spikes.	

TALKS & PRESENTATIONS

2016	comBinatorial blg daTa Test dAta Generator (BIT-TAG)	ASE'16, SINGAPORE
2014	Neuroscience From Below	STUDENT SUMMER COLLOQUIUM, MCGILL

TEACHING EXPERIENCE

Winter 2018	Teaching Assistant	UNIVERSITY OF WATERLOO
	Biomedical Ethics (Prof. Andrew Stumpf)	
Fall 2017	Teaching Assistant	UNIVERSITY OF WATERLOO
	Professional and Business Ethics (Dr. Jim Jordan)	
Fall 2011	SUS Peer Tutor	MCGILL
	Met with students routinely to go over physics and chemistry concepts; held exam review sessions.	

TECHNICAL SKILLS

Programming Languages: TypeScript, Clojure, Java, Python, C, Bash, MATLAB, SQL, Gremlin
 Data Querying & Management: MySQL, MongoDB, GraphQL, Elasticsearch, Redis
 Development & Automation: Git, Docker, GitHub Actions, Terraform, GCC, javac

LANGUAGES

English, Urdu, Pashto

ACTIVITIES & INTERESTS

2022 - Pres	Athlete	USA BOXING (NYC, USA)
	Training out of Brotherhood Boxing Club and SouthBox by Eric Kelly.	
2013 - 2014	Radio Host	CKUT-FM (MONTREAL, QC)
	Hosted Friday's “Off the Hour.” The show covered a wide range of topics including environmental activism, indigenous affairs, and provincial legislation.	