Quinn Winters

Work Eligibility: USA (US Citizen), Germany (Student Work)
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Education

Oct 2021 – Present

Technical University of Munich, Munich, BY, DEU
MSc Mathematics; *Focus areas – Analysis & PDE* (average grade in German scale: 1.2)

Aug 2013 – Aug 2017

Case Western Reserve University, Cleveland, OH, USA
BA Mathematics; *Summa cum laude* (average grade in German scale: 1,1)
Thesis: *Simultaneous Voronoi Diagrams and Gerrymandering*

Professional experience

Jun 2022 – Sep 2022

Institute of Science and Technology Austria, Klosterneuburg, Austria
Reserach internship - Julian Fischer's group
- Working on numerical methods for the Dean-Kawasaki equations.

Mar 2021 – Oct 2021

Personal Sabbatical

Oct 2020 – Feb 2021

Barkinglabs Corporation, New York, NY, USA
Lead Data and Machine Learning Engineer
- Lead project to develop new step-counting model for Fi "Smart Dog Collar"
  - Collected live data though custom smart-collar firmware, paw-sensor boots, and iPhone app (Swift, Embedded-C, Bluetooth/BLE, AWS)
  - Built model training infrastructure (Python, AWS, Typescript, TensorFlow)
  - Trained, compiled, and loaded models onto test hardware's resource-constrained microchip (Embedded-C, TensorFlow Lite)
  - Designed and evaluated tests to ensure proper model training (Statistics)
- Maintained data pipelines for marketing and operations teams (Spark, SQL, AWS)

Sep 2017 – Aug 2020

Palantir Technologies, New York, NY, USA (also London, UK & Abu Dhabi, UAE)
Forward Deployed Engineer
- Managed data integration team at oldest Middle East client (Leadership)
- Communicated directly with technical and non-technical clients and worked directly on access-limited systems, including the UAE, UK, and USA (Communication Skills)
- Demoed technical projects to key stakeholders and became regular attendee of strategic steering meetings (Demo Skills, Stakeholder Management)
- Created algorithms and co-authored micro-service to analyze spatial co-location patterns on ~100TB data set and present results on Palantir's custom mapping application (Java, Cassandra)
- Developed cross computer network pipeline for analyzing and fusing public AI data with sensitive intelligence to assist analysts (Spark, Shapely, GDAL)
- Authored and maintained data pipelines for large scale training and evaluation jobs for client's independent contractors (Spark, GDAL)
- Mentored intern and wrote successful hiring thesis and conversion (Mentorship)
- Presented in recruitment sessions in Boston, New York, and Paris (Public Speaking)

Relevant Student Work

Summer 2016 | **Rex Animal Health** (Illumina Accelerator Company), San Francisco, CA, USA
Data Science Intern
- Wrote and tested animal disease spread models on genetic and observational data
- Organized weekly tech talk program for Illumina Accelerator

Summer 2015 | **Wolfram Research** - Boston, MA
Summer Science Research Program
- Summer project on causal inference in unstructured datasets

Professional skills

Programming | Python, Java, SQL, Zsh/Bash, LaTeX

Software | Git, Unix, TensorFlow, TensorFlow Lite for Microcontrollers, Numpy/Scipy, Pandas, Apache Spark, GDAL, AWS Ecosystem, Palantir Ecosystem

Languages | English (native), German (learning), French (limited), Arabic (limited)

Research Workshops

May 2022 | *Workshop in Convexity and High-Dimensional Probability*, Atlanta GA, USA
Georgia Institute of Technology (Original scheduled for 2020, delayed due to COVID-19)

Jan. – Apr. 2021 | *The Interplay between High-Dimensional Geometry and Probability*, Remote
The Hausdorff Institute for Mathematics, University of Bonn

Oct. 2017 | *Metric Geometry and Gerrymandering* - Workshop and Hackathon, Durham NC
Duke University

Extracurricular and non-academic activities

At TU Munich
- President of the TU Munich Magician's society (https://tumzauberer.club)
- Founder and moderator for TUM Mathematics Discord group (∼230 active members)
- Created `random1on1-bot` program to automatically match students for coffee

At Palantir
- Arabic language lessons while in Abu Dhabi (approx. 1 year)
- Participated in and lead internal seminars about military ethics, data ethics, Middle East politics and counterterrorism

At CWRU
- Student representative to major university donors and the board of trustees
- Member of the selection committee for the Inamori Ethics Prize (2016–2017)
- Frequent attendee of the graduate Analysis & Probability seminar (2016–2017) and Floating Bodies/Asymptotic convex geometry seminar (2016-2017)

Interests

Mathematical
- Optimal transport and applications to both pure mathematics (geometric analysis, functional inequalities probability), and computing (sampling, image processing)
- High-dimensional probability, and probability in geometric spaces
- Functional analysis, functional inequalities, and applications

Professional
- Ethics especially in engineering, technology, and data-focused startups
- Mentorship