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### School Stanford University

M.S. Statistics, September 2016 - December 2018. GPA: 3.94

B.S. Mathematics, September 2014 - June 2018. Minor, German Studies. GPA: 3.90

Selected coursework: Honors real analysis, honors abstract algebra, Ph.D.-level probability theory, graph theory, number theory, statistical learning, algorithm design & analysis, automata & complexity theory, data mining, stochastics, honors quantum/thermal/E&M physics, computability, nonclassical logic.

# Work Google (YouTube)

Mountain View / San Bruno, CA

Data Scientist, August 2019 - Present.

Reduced calibration error of YouTube comments classifiers by a factor of 10. Designed system illuminating thousands of monetized creators cheating a "family-friendly" classifier, saving \$10MM/yr. Developed metrics & inference frameworks for comments quality & satisfaction. Architected strategy for identifying & managing unreliable human raters in the absence of ground truth. Built models to help creators understand their performance and competition in YouTube Analytics / Creator Studio.

## Cambrian Technologies (f.k.a. Vest)

San Francisco, CA

Cryptography Engineer/Scientist, June 2018 - August 2019.

Second hire at \$70MM Series A startup, backed by Andreessen Horowitz, Polychain et al., focusing first on investment products for proof-of-stake blockchains and later applied research in blockchain security & scalability. Built quantitative models for a staking marketplace on Tezos; collaborated with members of Stanford Applied Cryptography Group to implement a novel cryptosystem in Rust.

BMW Research Munich, Germany

Data Scientist Intern, June - September 2017.

Conducted statistical investigations in support of BMW's DriveNow car-sharing service and ParkNow parking assistance engine. Projects included development of a statistical testing framework for evaluating third-party traffic data, exploratory work in crowdsourced prediction of solar power production capacity from car-mounted light sensor data, and fleet analytics/visualization.

#### Stanford Mechanics & Computation Group

Stanford, CA

Research Assistant, June - September 2015.

Worked in Prof. Eric Darve's research group on the <u>inverse fast multipole method</u>, a linear-time direct solver for a broad class of dense linear systems. Translated mathematical theory behind solver into a novel real-time graph-based simulation of solver's operation, thereby generating insights for improving methodology and performance.

Skills Language: English (native), German (ACTFL certified Advanced / ~C1), Finnish (beginning)

Computation: R, Python, C[++], Haskell, Rust, SQL, Spark, AWS, UNIX, LATEX

Teaching: Teaching assistant for introductory computer science at Howard University.

Tutored undergraduate mathematical statistics, linear algebra and multivariable calculus.

Led after-school math program for 1<sup>st</sup>- and 2<sup>nd</sup>-graders in East Palo Alto, CA.

#### Awards Delta Phi Alpha. (national German honor society)

Stanford Division of Literatures, Cultures and Languages, Stanford, CA, 2018.

Outstanding performance in mathematics competition. (state level)

Elizabeth Haskins Mathematics Contest, Fitchburg, MA, 2014 + 2013 + 2012.

Superior paper in mathematical modeling. (national level)

M3 Challenge, Bolton, MA. Awarded to 53 of 1152 papers. 2014.