♦ 408-807-1472 hong.suh70gmail.com  $\diamond$  San Francisco, CA 

### **EDUCATION**

#### University of California, Berkeley

Ph.D. Mathematics Specializations: Probability, Partial Differential Equations Qualifying exams passed on April 9th, 2018

# University of California, Berkeley

M.A, Mathematics (GPA: 3.85) Graduate coursework: Probability, Numerical Differential Equations, Partial Differential Equations

### Pomona College

B.A. Mathematics (GPA: 3.89), cum laude, 3 department awards Coursework: Fundamentals of CS (functional programming), Data Structures & Algorithms

## SKILLS

Programming: Python, R, SQL, Java, Mathematica Tools/Packages: PyTorch, TensorFlow, scikit-learn, PySpark, NumPy, Pandas, tidyverse, Plotly Theory: Deep Learning, Machine Learning, Probability, Numerical Differential Equations, Data Structures, Algorithms

### SELECT PROJECTS

- ◇ Book recommendation web app. (Capstone project at The Data Incubator)
  - Designed and implemented a pipeline that ingests data from 1M+ user ratings over 300K+ books from Goodreads.
  - Built and trained an ALS recommender system on a 300MB+ dataset using scikit-learn.
  - Deployed a Flask web application for users to obtain book recommendations in real time.
- ♦ *Tennis win prediction model.* (Individual project)
  - Designed and implemented a prediction model for professional tennis player matchups using **Pandas**, **NumPy**.
  - Eliminated human supervision by automating hyperparameter selection using GPU optimization with CuPy.
  - Decreased log-loss error by about 1.5% compared to FiveThirtyEight's model.

### **EXPERIENCE**

#### **Data Science Fellow**

The Data Incubator, San Francisco, CA

♦ Completed projects involving distributed computing, SQL, classical machine learning, deep learning, and more using real-world datasets as large as 10GB.

#### Math Teacher

Proof School, San Francisco, CA

- ♦ Created and executed daily 2-hour lesson plans for 8 to 16 students covering advanced math subjects—such as universitylevel linear algebra, number theory, and discrete probability—to kids who love math.
- ♦ Created and supervised mathematical programming projects involving fast matrix multiplication, singular value decomposition, pseudorandom number generators, and more.

#### Graduate Student Instructor (GSI) and Researcher

UC Berkeley, Berkeley, CA

- ♦ Executed lectures and discussions as a GSI or primary lecturer to 20-50 undergraduate students in single-variable calculus, multivariable calculus, and linear algebra.
- ♦ Conducted research on stochastic interacting particle systems and presented at three seminars.

### PUBLICATIONS (AUTHORS IN ALPHABETICAL ORDER)

- ♦ M. Asada, S. Manski, S. J. Miller, H. Suh, Fringe pairs in generalized MSTD sets, Int. J. Number Theory 13.10 (2017): 2653 - 2675.
- ◊ P. Burkhardt, A. Z.-Y. Chan, G. Currier, S. R. Garcia, F. Luca, H. Suh, Visual Properties of Generalized Kloosterman sums, J. Number Theory 160 (2016), 237-253.

Berkeley, CA May 2019

Berkeley, CA

on leave

Claremont, CA May 2016

March – August 2020

September – November 2020

September – November 2020

June 2019 - June 2020

August 2016 – May 2019