Rohan Jhunjhunwala

rjhunjhunwala80@berkeley.edu | rohanjh.com

Education

University of California, Berkeley — Bachelor of Science, *Electrical Engineering and Computer Science (Fall 2018 - Spring 2020)*

GPA: **4.0** Honors: **Highest Distinction**, Graduated at age 19

Principles and Techniques of Data Science†, Introduction to Artificial Intelligence†, Database Systems†, Efficient Algorithms and Intractable Problems†, Data Structures†, Discrete Mathematics and Probability Theory†, Optimization Models in Engineering, Experimental Course in Mathematics (Proof based mathematics Seminar for the Putnam Exam)

Experience

Citadel —Quantitative Developer Global Credit (June 2021 -)

- First-ever implementation semi-randomized pre-merge PR testing reducing on-call burden and raising code-coverage from 0% - 68%
- Built internal DSL for bespoke risk and PnL
- Drove 10-100x performance improvements in our internal data flow-as-code implementation as part of a drive to create a more flexible performance attribution user experience.
- Improved reliability for remote-procedure calls for an automated distributed compute graph framework which enables counterfactual risk scenario analysis.

Sambanova Systems— Machine Learning Compiler Software Engineer (June 2020 - 2021)

- Using Pytorch models with Erdos-Renyi random topology found 10+ bugs in our Machine Learning compiler tool chain.
- Diagnosed numeral stability issues by finding random topology models with State-of-the-art (99.5%) accuracy on MNIST.
- Used Mixed integer programming (Gurobi, Python Bindings) reformulations of bin-packing and multicommodity routing to provide insight into on-chip resource allocation
- Designed visualization and analysis tools using frameworks like Pandas, Streamlit, and Tensorboard.

Booz Allen Hamilton—NASA International Space Station Developer Intern (Summer 2019)

- Built MSSQL database and CRUD frontend to track ISS Inventory: automating a 60+ hours of manual documentation process.
- Designed python approximation algorithms for computational problems stemming from spacecraft dynamics and geometry

Berkeley Electrical Engineering and Computer Science—Teaching Assistant, Discrete Mathematics/ Probability (September 2019 - May 2020)

- Taught classes, organized office hours, and designed equitable assessments in 700 student course

UC Berkeley Student Tech Services—Web/Mobile Developer (January 2019-May 2020).

- Made the UCB app accessible and engaging to all students
- Mentored high school interns by introducing them to conventions and best practices in the Software industry.

Objective

Build world-class solutions.

Skills

Languages: Python, Java, C/C++, C#/.NET

Application Architecture: RESTful design, SQL, JS/HTML/CSS, MVC/Razor, Flask, PaaS (Heroku/Google Cloud Platform)

Quantitative Reasoning: Linear Algebra, Group Theory, Graph Theory, Number Theory/ Combinatorics, Statistics, Optimization (Mixed Integer Programming, Convex Programming)

Personal Projects

NASA Space-Apps Challenge Finalist:
(Disaster relief Chatterbot)
Y-Combinator Hackathon 2018:
(Python Flask app, RSA Student ID)
Java Minimax/Alpha-Beta Chess AI
3D renderer procedural terrain (Java)
Penn-Apps Hackathon:
(Gesture based playlist control (Java))
Esoteric Language Interpreter IDE (Java)
Digital Art/ Mathematical Simulations
(Mandelbrot, Physics, Linear PDEs)
(Java/JS/CSS)
ILP based solvers for Vehicle Routing and Matchmaking (gurobipy)

Academic Interests

Biologically Inspired Engineering
Complexity/Computability Theory
Computational Geometry
Computational Intelligence Modeling
Stochastic Systems

Recreational Interests

Distance Running
1:36:59 Official Half-Marathon
19:57 Training 5k
34.4 Mile Findlay Backyard Ultra

Puzzling
Code-Golf (Shortest-Code wins)
Recreational Mathematics/
"Competitive Integration"
Board Games and Game Theory

Producer/Consumer of Academic Satire (sigbovik.org):
"Pessimal" Algorithms
mipmip.org/tidbits/pasa.pdf

† Indicates a Transcript Mark of A+, which conveys academic distinction, but is weighted identically