# Vikram Kher

Computer Science | Applied Math

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## Education

### University of Southern California - Viterbi School of Engineering
*Los Angeles, CA*

Bachelor of Science in Computer Science & Bachelor of Arts in Applied Mathematics
*August 2018 - PRESENT*

- **GPA: 4.0/4.0**
- **W.V.T. Rusch Undergraduate Engineering Honors Program, Academic Achievement Award (2020), Dean's List (2018-2019)**
- **Expected Graduation Date: May 2022**

### The Overlake School
*Seattle, WA*

Highschool
*August 2014 - June 2018*

- **Cumlative GPA: 93/100, unweighted**
- **SAT: 1560/1600 | SAT Math 2: 800/800 | SAT Physics: 800/800**

## Skills & Courses

**Languages** C++ (Proficient), Python (Proficient), Java (Proficient), HTML/CSS (Proficient), JavaScript (Intermediate)

**Courses** Advanced Analysis of Algorithms (PhD Level), Complexity Theory (PhD Level), Introduction to Algorithms and Theory of Computing, Applied Combinatorics, Calculus 3, Linear Algebra, Probability Theory

## Experience

### Computation and Data Driven Discovery Lab
*Los Angeles, CA*

Viterbi Undergraduate Researcher
*May 2020 - Present*

- Developed predictive modeling systems to determine ICU outcomes for COVID-19 patients
- Conducted exploratory data analysis with data sparsity matrices, t-SNE analyses, correlation matrices
- Preprint publication available at https://www.researchsquare.com/article/rs-108301/v1

### Undergraduate Teaching Assistant - Introduction to Algorithms and Theory of Computing
*Los Angeles, CA*

Course Producer
*August 2020 - December 2020*

- Led office hours to help students understand course concepts and lecture material
- Facilitated exam review sessions covering topics such as Greedy Algorithms, Dynamic Programming, and NP-Hardness

### Clari5
*Seattle, WA*

Software Engineering Intern (Part Time) - Financial Technology Company
*September 2019 - December 2019*

- Designed, implemented, and compared different string metric algorithms to reduce false-positive bank fraud alerts

## Projects

### Gladeo iOS App

Code the Change
*2020*

- Worked in team to develop app for career mentorship non-profit Gladeo
- Utilized Node and Express to create backend routes to handle account creation, password resetting, among other services
- Employed YouTube's APIs to enable automatic video uploading from app

### NP-Hardness in Popular Online Puzzle Games

Personal
*2020-2021*

- Working with Theoretical Computer Science PhD student to develop reductions from 3-SAT to in-game maps
- Part of an ongoing paper that will emphasize the educational value of the reductions in an undergraduate algorithms class

## Interests & Clubs

**Interests** Russian Literature, Pocket Billiards, Art History

**Clubs** Code the Change (Developer Position), Association of Computing Machinery