# ri Chandrasekaran

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#### EDUCATION

#### University of California, Berkeley

Berkelev, CA

Bachelor of Arts in Data Science and Applied Math

May 2026

Relevant Coursework: Data Structures, Algorithms, Artificial Intelligence, Linear Algebra, Optimization Models, Signal Processing, Real Analysis, Data Science, Structure of Computer Programs, Discrete Mathematics and Probability Experience

# **Engineering Intern**

June 2024 – Aug 2024

Fragile

San Francisco, CA • Contributed to the development of an internal platform utilized by 20+ investors, focusing on data aggregation and optimizing

- backend functionality through tools like AWS S3 to ensure seamless access to critical resources within the portal. · Assisted in implementing a revised data architecture using dbt and Prefect, streamlining automated testing workflows and
- significantly improving system efficiency and reliability • Automated Snowflake executions, minimizing testing frequency by 75%, enhancing operational efficiency and reducing resource usage

# Undergraduate Researcher

Jan 2024 – Present

UCSF - Larson Advanced Imaging

- San Francisco, CA • Collaborate with an interdisciplinary team utilizing Python to develop and analyze synthetic hyperpolarized 13C MRI data from 15 patients for myocardial perfusion quantification.
- Implement advanced image analysis techniques, including Non-negative Matrix Factorization (NMF), to extract meaningful features and reduce dimensionality
- Apply optimization methods such as constrained decomposition and linear regression to improve partial volume corrections and ensure accurate myocardial perfusion measurements

# Undergraduate Researcher

May 2023 – May 2024

Berkeley NetSys Lab

Berkeley, CA

- Collaborated with PhD candidate Sarah McClure to apply advanced modeling techniques, including time-series analysis and machine learning to develop predictive models of network congestion dynamics using Python and R
- Utilized 50+ simulations to derive insights and inform the development of congestion control strategies, enhancing network efficiency through data-driven modeling approaches
- Contributed to the design and execution of experiments evaluating congestion control algorithms, refining models to accurately forecast network congestion patterns and proactively mitigate disruptions

### Software Engineer Intern

May 2023 – Aug 2023

- Integrated advanced custom PDF generation functionality through the use of Axios; this enhancement is anticipated to accelerate the report creation process and ensures users receive real-time comprehensive insights
- Developed a React-based data processing and aggregation system, integrating APIs for autism diagnosis; streamlined data processing time by 50% accelerating report generation and enhancing overall operational efficiency

#### Co-Founder & Chief Executive Officer

July 2020 - Present

- Leading virtual classes of 40+ elementary school students and expanding our reach through over 20 classes, both online and in person, enriching the educational experience for a diverse student body
- Developing and curating a diverse STEM curriculum spanning 12+ subject areas, including Circuits, Basics of Coding, and more, contributing to over 700 students' growth and understanding
- Built a ReactJS-based educational platform with 2,000+ active users, providing a comprehensive learning experience for students to access online resources and virtual classes

#### Projects

- Build Your Own World | Java April 2023 May 2023 Designed and implemented a 2D tile-based world exploration engine that randomly generates a graphical tile-based world with 15-30 rooms using a tile renderer, allowing users to move around and interact with world objects
  - Implemented a GUI to display information on where users are located in the world, other key characteristics and a light source that can be turned on and off using the keyboard; provided user interface to save, quit and reload their worlds
  - Effectively managed the complexity of building a large system on building world exploration engine through better software engineering practices

- (PCA) in one model to optimize feature selection and reduce dimensionality.
  - Achieved a 91% accuracy rate in the most accurate model using a 70:30 training-to-testing split, effectively discriminating between healthy patients and those with Parkinson's Disease.

# TECHNICAL SKILLS

Languages: Python, Java, R, JavaScript, SQL, HTML/CSS, MATLAB

Frameworks & Technologies: React, TypeScript, Node.js, Flask, Git, NumPy, Matplotlib, pandas