

SURYA DUTTA

EMAIL: suryabrata.dutta@yale.edu WEBSITE: suryadutta.me

LINKEDIN: [suryadutta](#) GITHUB: [suryadutta](#)

EDUCATION

Yale University

B.S. Physics (Intensive), 2018 | GPA: 3.76/4.00

Likely Letter Recipient: Top 150 Applicants to Yale

SKILLS

PROGRAMMING: Python, Jupyter, Unix, SQL, MongoDB, Full Stack Javascript

RESEARCH: Data Analysis, Mathematical Modeling, Monte Carlo Simulations

INTERESTS: Chess, Guitar, Ballroom Dancing, Coffee

RESEARCH EXPERIENCE

CUORE, Research Assistant

Feb 2016 - Current

Maruyama Lab, Yale University

- Cryogenic Underground Observatory for Rare Events: large multinational collaboration building a ton-scale cryogenic detector for rare nuclear processes
- Developing algorithms and Monte Carlo simulations to identify contamination
- Enhancing current thermal models by improving mathematical parameters and implementing new numerical techniques in Python

CUORE, On-Site Research Assistant

Summer 2016

Gran Sasso National Laboratory, Italy

- Conducted critical tasks on-site prior to commissioning and data acquisition, including calibration hardware installation and diagnosis of cryogenic systems.
- Set up secure network infrastructure to monitor cryostat using LabVIEW virtual instruments, video streams, and custom Javascript web interface

McKinsey Research Group, Research Assistant

Summer 2015

Berkeley Lawrence National Laboratory

- Investigated use of superfluid helium-4 as a candidate for dark matter detection
- Developed Markov-Chain Monte Carlo simulations to create optimality conditions for detecting dark matter using energy kinematics and mathematical models (Python)

LEADERSHIP

Yale Undergraduate Research Association

Jan 2015 - May 2017

Co-Founder and President

- Co-founded 501(c)3 non-profit to support Yale undergraduate researchers
- Led 20 board members, oversaw public initiatives, and managed internal tasks
- Initiated and developed first university-wide database of research mentors, including more than 1400 listings from 60+ departments; Used by 1200+ Yale students in a 5 month period, growing user base with 60% rate of return
- Organized the first intercollegiate undergraduate research conference at Yale (Spring 2017), with 70 interdisciplinary presenters

AWARDS

Alan S. Tetelman Research Fellowship, Yale University

Mar 2016

Awarded for international research in the sciences

George J. Schulz Research Fellowship, Yale University

Mar 2015

Awarded for summer research in the physical sciences.