Alberto Cattaneo, Resume

Chicago, IL

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RESEARCH EXPERIENCE

University of Chicago, Chicago — *Research Assistant*

May 2020 - May 2022

- Reported to Professor Damiano Caprioli
- Worked within the Department of Astronomy and Astrophysics
- Used FORTRAN and CUDA to attain speedups by distributing work onto NVIDIA GPUs
- Worked with 2 other team members on solver

University of Chicago Flash Center, Chicago — *Research Assistant*

May 2019 - February 2020

- Reported to Dr. Petros Tzeferacos
- Worked on the front end of HPC application FLASH
- Used Python to improve performance and usability of FLASH
- Worked with a team of 10 people to review and troubleshoot code
- Increased ease of use of the front–facing part of FLASH as well as working on data parsing, handling and graphing

University of Chicago, Chicago — *Research Assistant*

June - August 2018

- Reported to Dr. Esmael Jafari Haddadian
- Created graphs to visualize large amounts of data using R
- Created 3D models of protein interactions using NAMD
- Worked alongside 3 other students on both modeling and visualising
- Ran simulations on University of Chicago's Midway cluster

Bulletin of Atomic Scientists, Chicago — *IT Support*

June - August 2017

- Reported to Professor Robert Rosner, at the University of Chicago
- Calculated the start up and maintenance costs of different types of nuclear reactors
- Read through Department of Energy and independent papers for relevant data
- Provided the data to the bulletin for use in their new cost calculator

EDUCATION

University of Utah, Salt Lake City — *Computer Science PhD*

August 2023 - Ongoing

Working with professor Varun Shankar

Loyola University of Chicago, Chicago — *Bachelor of Science*

August 2017 - May 2021

Major in Computer Science, Minor in Business Administration

Graduated Cum Laude; Dean's list 2019, 2020, 2021; Received Dean's Scholarship

Relevant coursework:

- Discrete Structure
- Data Structures

- Computer Systems
- Algorithms
- Natural-Language Processing
    - Worked on satire detector project
- Programming Languages
- Software Engineering
- Machine Learning
    - Worked on Twitter political alignment calculator
- Software Systems Analysis
- Software Quality & Testing

University of Chicago Laboratory Schools, Chicago — *High School Diploma*

September 2013 – June 2017

WORK EXPERIENCE

Hyde Park Art Center, Chicago — *Teaching Assistant*

June - August 2014, 2015, 2016

- Supervised and taught groups of 6-20 of children ages 4-15
- Taught sculpture, drawing,painting, photography and fabric work
- Supported main instructors and teaching team by entertaining students, preparing lesson materials and handling arguments

Lega Ambiente, Uccellina National Park, Grosseto Italy — *Volunteer Park Ranger*

July - August 2016

- Worked at a kiosk and informed people about the park and surrounding area
- Patrolled the beach area collecting garbage and enforcing park rules
- Prevented fire starting, littering and disruption of the local wildlife

University of Chicago Laboratory Schools, Chicago — *Teaching Assistant*

June - August 2018

- Supervised and taught a group of 20 students aged 14
- Taught HTML and Javascript
- Gave lectures on practical uses of computer science

Northern Trust, Chicago — *Software Engineer*

October 2021 - Ongoing

- Consulted on behalf of Tata Consultancy Service
- Assisted in writing documentation for banking software
- Hand tested and wrote automatic tests for said banking software.

SKILLS

Programming skills: Java, HTML, Python, FORTRAN, CUDA, C

Experience in web page design

Experience in repairs of small electronics

Basic understanding of circuitry

Teaching experience K-10th grad

Fluent in English and Italian