# Aiden Cullo

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# **EDUCATION**

BS in Physics, Math, and Computer Science

Aug 2020

Binghamton University summa cum laude

Binghamton, NY, US

# **EXPERIENCE**

Mar 2022—Jun 2022 Annunciation House

Shift Coordinador

El Paso, TX, US

Helped refugees detained by border patrol reconnect with their families or sponsors, travel to their host cities, and attend their mandated court appearances.

Casa Tochan Jan 2022—Mar 2022

Volunteer

CDMX, MX

Aided migrants in finding jobs, renting apartments, and petitioning the government for asylum, residency, citizenship, driver's licenses, work permits, and vaccinations.

Oct 2021-Nov 2021 Tree of Hopes

Volunteer

Juárez, MX

Coordinated with sponsors, lawyers, police, government officials, and healthcare professionals to support guests and safeguard their civil and informational rights.

### RESEARCH

**Binghamton University** 

Oct 2020-Nov 2020

Research Assistant

Binghamton, NY, US

Employed an evolutionary algorithm and neural network to search for stable alloy crystal structures. Helped parallelize the group's MAISE software package.

California Institute of Technology

Jun 2019—Aug 2019

SURF Research Fellow

Pasadena, CA, US

Performed scanning tunneling microscopy/spectroscopy of topological defects in the surface state of pure and Cr-doped  $(BiSb)_2Te_3$ -bilayer topological insulators.

Sapienza University of Rome

Jun 2018—Aug 2018

Research Assistant

Rome, IT

Constructed a convolutional neural network to classify particle collisions for the DarkSide-20k experiment. Generated nuclear and electron recoil event data.

Software Engineer Intern

Jun 2017—Aug 2017 Mountain View, CA, US

Built a library in C++ and MATLAB to represent/interpret battery metadata subject to

varying degrees of uncertainty for autonomous drone fleets.

#### **SKILLS**

**NASA** 

**Languages:** English (native), español (fluent), francés (elem.), portugués (elem.)

Programming Languages: C++, C, Java, Python, MATLAB, OpenMP, SQL, Lisp IATEX

Technologies: Windows, macOS, Linux, Word, Excel, PowerPoint, Git, Vim, Emacs, Bash, Zsh, CLI

# **PUBLICATIONS**

Samad Hajinazar, Ernesto D. Sandoval, Aiden J. Cullo, and Aleksey N. Kolmogorov. Multitribe evolutionary search for stable cu—pd—ag nanoparticles using neural network models. Phys. Chem. Chem. Phys., 21:8729–8742, 2019