

Aiden Cullo

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aidencullo.com

github.com/cullo7

EDUCATION

SUNY Binghamton	<i>Binghamton, NY, USA</i>
B.S. Mathematics	May 2020
B.S. Applied Physics	Aug 2020
B.S. Computer Science	Aug 2020
summa cum laude	

EXPERIENCE

Tradigro	Dec 2022 - Present
<i>Software Developer</i>	<i>Chicago, USA</i>
Programming web front-end design, functionality, and data processing/analysis using Vue.js and Vuex libraries integrated with a backend mongoDB data management client.	
Supercerebro	Dec 2022 - Present
<i>Software Developer</i>	<i>Bogotá, Colombia</i>
Developing a mobile application using a React full-stack model and a multi-platform Ionic deployment scheme. Implementing PHP/MySQL server-side backend protocols to store credentials, preferences, and progress.	
SUNY Binghamton	Oct 2020—Nov 2020
<i>Research Assistant</i>	<i>Binghamton, NY, USA</i>
Employed an evolutionary search algorithm for stable-alloy nanocrystal structures using C and openMP . Helped parallelize MAISE software package for use by wider computational physics community.	
California Institute of Technology	Jun 2019—Aug 2019
<i>SURF Research Fellow</i>	<i>Pasadena, CA, USA</i>
Performed scanning tunneling microscopy/spectroscopy of topological defects in semiconductor surface state of pure and Cr-doped $(BiSb)_2Te_3$ -bi-layer topological insulators.	
Sapienza University of Rome	Jun 2018—Aug 2018
<i>Research Assistant</i>	<i>Rome, Italy</i>
Constructed a convolutional neural network with python to classify particle collisions for the DarkSide-20k experiment. Generated and trained on 30,000 nuclear and recoil data points with 97.5% accuracy.	
National Aeronautics and Space Administration (NASA)	Jun 2017—Aug 2017
<i>Software Engineer Intern</i>	<i>Mountain View, CA, USA</i>
Built a library in C++ and MATLAB to interpret 1000+ battery metadata indicators with varying degrees of uncertainty and loss for autonomous, mission-critical drone fleets of up to 100.	

VOLUNTEERING

Annunciation House	Mar 2022—Jun 2022
<i>Shift Coordinator</i>	<i>El Paso, TX, USA</i>
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
<i>Volunteer</i>	<i>CDMX, Mexico</i>
Aided migrants in finding jobs, renting apartments, and petitioning the government for asylum, residency, citizenship, driver's licenses, work permits, and vaccinations.	

SKILLS

Languages: English (*native*), Spanish (*fluent*), French (*elem.*), Portuguese (*elem.*)

Programming Languages: C++, C, Java, Python, JavaScript, PHP, MySQL, Lisp, Clojure, \LaTeX

Technologies: Linux, macOS, Windows, Docker, Git, Vim, Emacs, VS Code, Bash, Zsh, React, Node, Vue, Ionic

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