Aiden Cullo

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EDUCATION

SUNY Binghamton   *Binghamton, NY, USA*
  B.S. Mathematics   **May 2020**
  B.S. Applied Physics   **Aug 2020**
  B.S. Computer Science   **Aug 2020**
  summa cum laude

EXPERIENCE

Tradigro   **Nov 2022 - Present**
Software Developer   *Chicago, IL*
> Programming full-stack design, functionality, and data processing using **Vue.js** and **Vuex** libraries integrated with a backend **mongoDB** data management client.

Supercerebro   **Oct 2022 - Apr 2023**
Software Developer   *Bogotá, Colombia*
> Developed a PWA using a **React** full-stack model and a multi-platform **Ionic** deployment scheme. Implemented backend services through **Google Firebase** in order to store credentials, preferences, and progress.

SUNY Binghamton   **Oct 2020—Nov 2020**
Research Assistant   *Binghamton, NY*
> 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**
SURF Research Fellow   *Pasadena, CA*
> 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**
Research Assistant   *Rome, Italy*
> 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**
Software Engineer Intern   *Mountain View, CA*
> 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**
Shift Coordinator   *El Paso, TX*
> 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, Mexico*
> 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 (*prof.*), Portuguese (*elem.*)

Programming Languages: JavaScript, TypeScript, Python, C++, C, Java, PHP, MySQL, Prolog, Clojure, LaTeX

Technologies: React, Vue, Angular, Vite, Node, Ionic, Firebase, MongoDB, Ubuntu, Git, Emacs, Vim, Bash, Zsh

PUBLICATIONS

1. 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