

Samuel Petruescu

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## EDUCATION

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| <b>University of Chicago, (UC)</b><br>Quantum Computing Graduate Certificate                                | <b>10/2022 — 12/22</b> |
| <b>University of California, Davis (UCD)</b><br>B.S. Applied Physics, Concentration in Physical Electronics | <b>2019 — 06/2022</b>  |
| <b>Yuba Community College (YCC)</b><br>A.S. Mathematics and A.S. Natural Sciences.                          | <b>2015 — 2019</b>     |

## RESEARCH EXPERIENCE

**UC Davis Mentorship for Undergraduate Research Participants in the Mathematical and Physical Sciences (MURPPS) Emerging Scholar** **2021-2022**

- Attended Academic and professional development workshops and seminars

## CERTIFICATIONS

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|--|--------------------|
| • QBronze Quantum Computing Certification - QWorld                     | <b>2022</b>        |
| • QSilver Quantum Computing Certification - QWorld                     | <b>2022</b>        |
| • IBM Certified Associate Developer - Quantum Computation using Qiskit | <b>In Progress</b> |
| • Qubica AMF Mechanic Training Certification                           | <b>2021</b>        |

## COMPUTING AND TECHNICAL SKILLS

- Python, ROOT, System VHDL/Verilog, Digital circuit design, C++, basics of MySQL
- Quantum Computing methods and algorithms
- **Software:** Qiskit, Quartus prime, Jupyter Notebook, Cadence/OrCad, Excel, Microsoft Office Suite, ModelSim, Vivado

## PROJECTS

- Matrix multiplication implementation on a Basys 3 FPGA using Verilog. Designed hardware accelerators for the matrix multiplication, which can be modified for tensor algebraic applications.
- Implementation of QAOA(Quantum approximate optimization algorithm) to solve a MAXCUT problem
- Using python, developed a portable software to be implemented on a raspberry pi with a GUI. Game is implemented physically for use in airsoft. (For more info and code, see GitHub [Here](#))
- Analysis of recursive functions and bifurcation using python
- Simple Tic Tac Toe AI using basic python

## WORK EXPERIENCE

<b>Program Assistant, UC Davis Undergraduate Research Center</b>	<b>2022 – Present</b>
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- Business Administration, assisting in running grant programs
- Scheduling appointments in calendars and following up correspondences
- Finance administration and budget adjustments using Quali including making payments/purchasing orders and distributing grant funds
- Data consolidation using excel for use in research reporting for program grants and awards
- Ensuring compliance with University and State policies regarding fund use for Nonprofits
- Creation of promotional material and posting on popular social media platforms
- Use of Mail Merging for alerting applicants of their awards

**Mentor, UC Davis Mentor Collective**

**2022 – Present**

- Meet with students and provide answers to questions regarding the university and procedures
- Help students acclimate to a research driven environment and to a quarter system

**Student Mechanic Lead, UC Davis Memorial Union Games Area**

**2021 – 2022**

- Used critical thinking to diagnose, assess, and problem solve malfunctions and errors in bowling machines and resolving any mechanical or electrical system damages in a time and cost effective manner
- Upheld regular maintenance including safely removing and replacing damaged parts, working in a high pace environment with heavy machinery
- Prepared written machine documentation and manuals for use in training using Word
- Demonstrated excellent customer service skills interacting with customers

**Founder, Executive Director, UCD Directory**

**06/2020 – Present**

- A free community service called the “UCD club Directory”. Created to help network students by providing access and discord server links for clubs, student made communities, dorm halls, course servers, and university resources and programs. Link for access: <https://discord.gg/ucf44wN>
- Learned time management skills for overseeing large communities as it grew to over 12,000 members
- Used popular social media as avenues for promotions and interaction such as discord, twitter, etc. and created a newsletter using mailchimp
- Sponsor acquisition and retention
- Programmed website for ease of accessibility of data for general community and those with disabilities

**Founder, Executive Director, Esports at UC Davis**

**2020 – 2022**

- Founded UC Davis Esports and managed over 17 Competitive teams. Developed structural and corporate documents including inclusion plans, rule books, and proposals using Microsoft Word.
- Written and oral proposal presentation to Student Affairs
- Showed leadership and organizational skills in assisting planning and hosting esports events including inclusion events such as a women in esports boot camp in partnership with the UC Davis Vice Chancellors office in Student Affairs. With student affairs on community development.
- Fostered partnerships and connections with Esports programs at other universities across the world
- Budget management using Excel, supervision of a team of students

**Sonshine Ministries Volunteer**

**Summer 2018**

- Demonstrated attention for detail and quick thinking, caring for the lives of up to 25 campers with one other staff
- Multitasked well with as many as 100 students around, while cooking, cleaning, mentoring, and

monitoring the safety of students doing water related activities and provided counseling to hundreds of students

**English Tutor - Yuba Community College**

**08/2014 — 06/2015**

- Worked dedicatedly with students of all backgrounds, including English as a second language (ESL) students to help develop their writing skills

**MEDIA MENTIONS**

- Women's Inclusion Esports boot camp, TheAggie Paper, read article [here](#)
- Directory community discord server, TheAggie Paper, read article [here](#)