

Ian Johnson

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Summary

I am a quick and versatile learner, adaptable to a variety of challenging situations and tasks. I have a strong background in mathematics, as well as experience in computer programming.

Education

University of Virginia

B.A. in Mathematics (advanced track) and Physics

May 2017

Overall G.P.A.: 3.96

- Echols Scholar
- Edwin E. Floyd Prize in Mathematics (2017)
- Intermediate Honors (2016)
- Dean's List (Spring 2015, Spring 2016, Fall 2016)

Experience

Volunteer Tutor

FACETS

September 2017–Present

Centreville, VA

- Teach computer, math and English skills to adults and children in a low-income community.
- Provide proactive technical support to community center.

Undergraduate Physics Researcher

UVa Solid Polarized Target Group

April 2015–September 2017

Charlottesville, VA

- Develop simulations and mathematical models from systems of differential equations and real data.
- Design and implement software to assist in lab tasks.

Undergraduate Mathematics Researcher

University of Virginia

May 2016–July 2017

Charlottesville, VA

- Apply individual study of new material to research efforts.
- Collaborate with research adviser to investigate novel concepts.

Vice President & Secretary

Kinetic Sound

May 2015–May 2017

Charlottesville, VA

- Co-founded successful student organization.
- Coordinate logistics of large-scale events with over one hundred attendees.

Skills

Computer proficiency

- Experienced with Windows and GNU/Linux systems (day-to-day usage and basic administration)
- Proficient in Microsoft Office (Word, Powerpoint, Excel) and equivalent products

Programming

- Languages: C, JavaScript, Rust, LabVIEW, C++
- Web tools: HTML, CSS, JSON
- Development tools: Git, make, NPM/Yarn, GCC, POSIX shell scripting
- Selection of projects (see <https://github.com/ianprime0509> for more):
 - A controller for a stepper motor, written in LabVIEW (<https://github.com/ptgroup/stepper-motor-controller>)
 - A Chip-8 emulator, written in C (<https://github.com/ianprime0509/chip8>)

Publications and presentations

- Spin nilHecke algebras of classical type (<https://arxiv.org/abs/1706.06240>)
- Chain Posets (<https://arxiv.org/abs/1802.05813>)

- Automated Microwave Frequency Control in Dynamic Nuclear Polarization Experiments (<http://meetings.aps.org/link/BAPS.2016.APR.K10.2>)