Hayley Suzanne Russell

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UNDERGRADUATE EDUCATION

North Carolina State University   GPA 3.875
Bachelor of Science in Mathematics   Major GPA 4.000
Bachelor of Science in Computer Science
Expected Graduation May 2019

EDUCATION ABROAD

Budapest Semesters in Mathematics
Budapest, Hungary - Spring 2018
Aquincum Institute of Technology
Budapest, Hungary - Spring 2018

RELEVANT COURSEWORK

Computer Science: Software Engineering, Computer Graphics, Data Structures, Operating Systems, Computing Theory
Mathematics: Numerical Anaysis, Probability, Graph Theory, Linear Algebra I & II, ODEs, PDEs, Real Analysis

RESEARCH EXPERIENCE

Theory in Practice Lab | Undergraduate Researcher   Aug 2018 - Present
Working with Dr. Blair Sullivan to study intermediate-scale network structure to develop and optimize novel algorithms.

Multiscale Viral Dynamics Lab | Undergraduate Researcher   Aug 2016 - Dec 2017
Worked with Dr. Ruian Ke to design a stochastic agent-based cellular automata to model the spatial temporal interferon-cell interactions and the effect of influenza packaging on gene reassortment.
Presentations:
- Comparative Medicine Institute Research Symposium (Won 2nd prize for Undergraduate Poster)
- NC State University Summer Undergraduate Research Symposium
- Society for Undergraduates in Mathematics Series Honors Presentation
- NC State Undergraduate Research Slam

Funding:
- Comparative Medicine Institute - $5,000
- Provost Professional Experience Program - $2,000
- Office of Undergraduate Research Summer Research Grant - $2,000

Science Education Alliance Phages Project | Undergradate Researcher   Aug 2015 - Dec 2015
Worked with Dr. Eric Miller to isolated and annotated a bacteriophage DNA that infects *Paenibacillus larvae.* Compared gene 65: ArpU-like transcriptional regulatory protein to previously isolated bacteriophages to determine the evolution between the bacteriophage and bacteria
Presentations:
- NC State University Spring Undergraduate Research Symposium

WORK EXPERIENCE

Facebook Menlo Park, CA | Software Engineering Intern   May 2018 - Aug 2018
- Streamlined a major pain point and increased user engagement
- Developed server and client code in Hack, PHP, and Objective-C
- Reviewed and tested team code
- Integrated changesets into a complex, poorly-documented codebase

TEACHING EXPERIENCE

Foundations of Advanced Mathematics | Teaching Assistant   Sep 2018 - Present
- Provided additional instruction for an introductory proofs course for math majors
- Held 2 hour problem sessions twice a week and extra sessions before exams

Introduction to Java | Teaching Assistant   Jan 2017 - Dec 2017
- Assisted in teaching an introductory programming class and held weekly office hours
- Proctored, graded and provided constructive feedback on exams and assignments

PhysTec Problem Session | Learning Assistant   Aug 2016 - Dec 2016
- Facilitated problem sessions for an introductory physics classes
- Encouraged collaboration and innovative problem solving in a classroom setting

University Tutorial Center | Tutor   Aug 2016 - Dec 2016
- Guided and supplemented the learning of two students in Calculus I and II
- Cultivated better study habits to match the learning style of each individual student

Mathnasium of Myers Park | Instructor   May 2016 - Aug 2016
- Taught conceptual mathematics and computation to students K-12
- Created an encouraging environment for students to develop critical thinking skills

LEADERSHIP EXPERIENCE

Society for Undergraduate Mathematics | President   Aug 2015 - Present
- Planned social and professional networking events, designed the department newsletter
- Promoted STEM interest in students through outreach in middle and elementary schools

Quad Area Council | Director of Marketing   Aug 2015 - May 2016
- Fostered an inclusive and stimulating environment between three residence halls
- Organized community building events and advertised using Adobe Illustrator

Service Raleigh | Logistics committe member   Aug 2015 - Apr 2016
- Planned and organized the annual service day for 2,000 volunteers in the Raleigh area
- Advertised the event and secured donations from various retail stores in the area
- Awarded Best Committee Member for Service Raleigh 2016 Logistics Committee

VOLUNTEER EXPERIENCE

North Carolina STEM Education Service Trip | Volunteer   Apr 2017 - Apr 2017
- Promoted STEM learning in rural, low-income middle schools on a week long service trip
- Developed and implemented engaging hands on physics experiments

Undergraduate Research Advisory Council | Mentor   Aug 2016 - Dec 2016
- Mentored 2 students and reviewed 4 papers for NC State University's Research Journal *INK*
- Volunteered at events to connect students to learn and participate in research opportunities

HONORS

Goodnight Scholar
University Scholar
Mathematics Honors Program
Computer Science Honors Program
Grace Hopper Conference Student Scholarship (2017)
Charles F. and Ethel E. Lewis Scholarship (2017)
College of Science Dean's Circle Scholar (2015)
American Association Teachers of German Study Trip
   Scholarship Recipient (2015)

TECHNICAL SKILLS

Languages: Java, C++, C, MatLab, JavaScript, Python3,
   Objective-C, HTML, CSS, Hack, PHP, Maple
Environments: MacOS, Linux
Tools: GitHub, Eclipse, XCode,
   Adobe InDesign, Adobe Illustrator
Skills: debugging, test driven development,
   object oriented programming, LaTeX, iOS,
   OpenGL, version control, x86 Assembly, agile
   dynamic programming, competitive programming