

ALYSSA HOPPER

Eager to apply analytical and problem-solving skills in a meaningful role

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EDUCATION

B.A. in Mathematics, Neuroscience minor

Carleton College

Sept 2020 – June 2024 Northfield, MN

Thesis Title: The Continued Fraction Expansion of e

- Independently researched convergence properties of Euler's number, reconstructing proofs and formalizing gaps in existing literature.
- Completed hands-on labs in genetics and neuroscience, including DNA extraction, PCR, microscopy, and work with drosophila and rats.
- Applied coding and data analysis in both biology and math contexts.

EXPERIENCE

Math Tutor

Sept 2018 – Current

- Provided paid one-on-one instruction in Algebra, Geometry, Pre-Calculus, Number Theory, and Statistics for students from middle school through college.
- Tutored a student who spoke only Russian, using my fluency to translate math concepts and assignments while supporting her transition to English-based learning.

Administrative Assistant

Johnstone Supply

Jun 2017 - Aug 2023 Golden Valley, MN

- Managed data entry and maintained customer files using Excel and other data management tools.
- Supported daily operations by filing and organizing customer information and business documents.
- Assisted with organizing and cataloging inventory, including tracking stock levels and ensuring accurate product information.

INTERESTS

Useful Interests

- Coding and Software Development
- Reading (50+ books a year)
- Genetics and Neuroscience
- Code Breaking and Theoretical Math

Less Useful but Still Fun Interests

- Crossword Puzzles and Sudoku Variants
- Long-distance Running and Hiking
- Medieval and British History
- Piano, Singing, and Songwriting

STRENGTHS

- Effective & Confident Communicator
- Problem Solver
- Curious and Inquisitive
- Quick Learner
- Energetic
- Social and Outgoing

- LaTeX
- Python
- C++
- Java
- HTML, CSS, and Javascript
- Excel
- Mathematical Reasoning
- Data Analysis
- Statistical Analysis
- MatLab

LANGUAGES

English ● ● ● ● ●
• Native proficiency

Russian ● ● ● ● ●
• Spoken in home and with overseas family.

French ● ● ● ● ●
• Studied in high school, continued through college

COURSES

Mathematics

- Elementary Number Theory
- Analytic Number Theory
- Abstract Algebra
- Ordinary Differential Equations

Computer Science

- Data Structures
- Algorithms
- Computation and Complexity
- Artificial Life and Digital Evolution

Neuroscience and Biology

- Developmental Neurobiology
- Neurons, Circuits, and Behavior
- Genetics
- Sensation and Perception