OLGA (OLYA) GOLOVATSKAIA
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EDUCATION

Mount Holyoke College, South Hadley, MA — Bachelor of Arts, expected May 2025
Majors: Computer Science and Mathematics — GPA: 3.82
Relevant Coursework: Algorithms, Machine Learning, Linear Algebra, Operating Systems, Real Analysis, Optimization

ACADEMIC HONORS

Global Perspectives Award, *Mount Holyoke College (2021-Present)*

- Prestigious award granted to the top 5% of international students for exceptional academic performance
- Selected from a competitive pool of 400+ international students for outstanding contributions to cross-cultural dialogue

RESEARCH EXPERIENCE

Undergraduate Research Assistant, REU program for Combinatorics, Algorithms, and AI for Real Problems, *University of Maryland, College Park, MD (June 2024 - August 2024)*

- Investigated theoretical problems in computational geometry within the Hilbert metric space, focusing on problems such as the minimum enclosing ball
- Proved that minimum radius balls over metric spaces with the Heine-Borel property are LP-type problems
- Developed explicit primitives for computing minimum radius balls in the Hilbert metric and proved extension properties for weak metric spaces
- Contributed to developing dynamic JavaScript-based software for manipulating and visualizing Funk, reverse Funk, and Thompson balls in convex polygonal domains, available at https://funk-geo-visualizer.vercel.app/

PUBLICATIONS

- Banerjee, H., Day, C. I., Hunleth, M., Hwang, S., Gezalyan, A. H., Golovatskaia, O., Parepally, N., Wang, L., & Mount, D. M. (2024). On the Heine-Borel property and minimum enclosing balls. arXiv preprint arXiv:2412.17138
- Banerjee, H., Day, C. I., Gezalyan, A. H., Golovatskaia, O., Hunleth, M., Hwang, S., Parepally, N., Wang, L., & Mount, D. M. (2025). Software for the Thompson and Funk Polygonal Geometry. arXiv preprint arXiv:2503.01988

PROFESSIONAL EXPERIENCE

Proposal Development Apprentice, L'Space Academy NASA Proposal Writing and Evaluation Experience, NASA - National Aeronautics and Space Administration, *Remote (May 2024 - August 2024)*

- Completed an intensive proposal writing training, guided by a NASA Chief Technologist and L'SPACE faculty
- Collaborated with a team to develop a competitive proposal for NASA project funding
- Chaired a NASA review panel, leading discussions and evaluations
- Presented the proposal to industry professionals, incorporated their feedback, and iteratively improved the project to enhance its quality and feasibility

Software Development Intern, Pension Fund of the Russian Federation, Ufa (*June 2021 - August 2021, June 2022 - August 2022*)

- Maintained and monitored SQL databases for pension records, ensuring data integrity through regular validation checks
- Collaborated with Senior Software Engineers on Python scripting for large-scale data migration and cleaning projects
- Supported team documentation efforts and followed version control protocols to maintain codebase quality

TEACHING EXPERIENCE

Computer Science Teaching Assistant, *Mount Holyoke College, South Hadley, MA (January 2024 - May 2025)*

- Conducted personalized one-on-one mentoring sessions for students enrolled in an Algorithms course
- Strengthened students' understanding of fundamental algorithms, including Dijkstra's, BFS, DFS, Kruskal's, and Prim's algorithms
- Guided students in analyzing algorithmic complexity and optimizing code for time and space efficiency

Mathematics Teaching Assistant, *Mount Holyoke College, South Hadley, MA (September 2022 - May 2025)*

- Provided tutoring sessions for small groups of students enrolled in a Linear Algebra course
- Assisted the course instructor by grading assignments and providing feedback to students
- Established communication between the course instructor and students

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

Student Representative, Computer Science Society, *Mount Holyoke College (September 2022 - May 2024)*

- Developed academic and career guidance program leading to successful tech industry internship placements
- Established peer mentorship initiative connecting first-year students with experienced upperclassmen

Outreach Coordinator, Girls Who Code Club, *Mount Holyoke College (January 2023 - May 2024)*

- Led campus-wide initiatives to increase diversity in technology, expanding club membership, and engagement
- Developed a mentorship program integrating technical skills, career development, and leadership training

Student Mentor, Hackathon, *Mount Holyoke College (November 2024)*

- Led workshops on web development and API integration for first-time hackathon participants
- Guided teams through technical implementation, including debugging, Git workflow, and deployment

SKILLS

Programming Languages: JavaScript, Java, Python, MATLAB, C, SQL, R
Development Tools & Frameworks: React, Node.js, TensorFlow, Spring, Git, LaTeX
Languages: Russian (*native*), English (*professional proficiency*), German (*limited proficiency*)