OLGA (OLYA) GOLOVATSKAIA
50 College St., South Hadley, MA, 01075
Portfolio: olgagol.vercel.app
o.golovatskaia@gmail.com, 646-420-6154

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)*

- Created academic/career guidance program boosting tech 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)