# Rose Silver

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## Education

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|---|---|---|
| Sept 2017 – May 2021 | BS in Mathematics, Minor in Physics (4.00/4.00) | Northeastern University |
| Sept 2021 – Current | PhD in Computer Science (3.95/4.00)<br>*Advisor: Prof. Jonathan Ullman*<br>*Interests: Theory, Differential Privacy, ML, Software Engineering* | Northeastern University |

## Awards

**2020, 2021** — Northeastern University President's Award
- Awarded to the 10 top students in graduating class of roughly 3000

**2018** — Undergraduate Women in Physics Research Award
- Awarded to a woman in the physics department based on research

**2018, 2020** — Lawrence Award for Undergraduate Scholarship
- Awarded to 10-15 students in the physics department

## Experience

**Sept 2021 – Present** — *PhD Student*, Northeastern University, Khoury College of Computer Sciences
- Developed differentially private algorithms for the interior-point problem
- Joint work with Maryam Aliakbapour and Jonathan Ullman
- Interested in developing theoretically sound algorithms that can be applied to real-world privacy challenges
- Select coursework includes: Advanced Algorithms (student and TA), Intensive Systems, Advanced Machine Learning, and Sublinear Algorithms

**Jun 2021 – Aug 2021** — *Software-Engineering Intern*, Kythera Space Solutions
- Worked within an agile team to develop a satellite management application
- Using C++/Qt, I independently developed a full-stack, multi-featured window within the application and presented the product to 6 customer representatives
- Refactored and modernized 1000+ lines of legacy code

**May 2020 – Aug 2020** — *Math Researcher*, UCONN Mathematics Research Experience for Undergraduates
- Proved new theorems about the Bipartite Cambrian Lattice
- Co-authored paper *"Box-ball systems and RSK tableaux"* which appeared in the *33rd Conference on Formal Power Series and Algebraic Combinatorics* (FPSAC)

**Jul 2019 – Dec 2019** — *Applied Research Co-Op*, E Ink Corporation
- Developed techniques for fundamental circuit modeling of devices
- Implemented MATLAB and Excel VBA analysis tools to model relationships between device electrical measurements and optical performance

**Jul 2018 – Jul 2019** — *Research Assistant*, Northeastern University Nanophysics Laboratory
- Designed and built 3 graphene field effect transistors for testing nano-properties

## Skills

C++, Python, TensorFlow, Github, GitKraken, Qt, MATLAB, Sage, Mathematica