Noble Mushtak

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Education

Northeastern University–Khoury College of Computer Sciences — *Boston, MA*

CANDIDATE FOR BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND MATHS, GPA: 4.0/4.0 — *Sep. 2019-Present*

- **Expected Graduation**: May 2023
- **Graduate Courses**: Topology I | Algebra I | Advanced Algorithms
- **Undergrad Courses**: Object-Oriented Design (ongoing) | Networks and Distributed Systems (ongoing) | Theory of Computation | Logic and Computation | Linear Algebra | Probability and Statistics

Marshwood High School — *South Berwick, ME*

VALEDICTORIAN OF CLASS OF 2019 — *Sep. 2015-Jun. 2019*

Skills

Languages Proficient in Python, C, C++, Java; Familiar with HTML, CSS, JavaScript, Bash, Haskell, Rust

Systems Windows, Mac OS, Ubuntu, Debian, Android

Software Google Docs, Google Sheets, Git, LaTeX, Overleaf

Experience

Northeastern University — *Boston, MA and Online*

STUDENT TUTOR — *Jan.-Apr., Sep. 2020-Present*

- Tutored for Northeastern's Fundamentals of Computer Science I course
- Reviewed and left thorough feedback on students' coding homework assignments
- Held office hours in order to mentor and guide students on homework assignments

Northeastern Summer Math Research Program — *Online*

STUDENT RESEARCHER — *May-Jun. 2020*

- Worked with another Northeastern undergrad to study fractional revival in quantum spin chains
- Coded Sage program to find graphs which exhibit fractional cospectrality
- Wrote 58-page paper in LaTeX explaining results, including several proofs
- Created and presented 45-minute Beamer slideshow to explain results in front of Northeastern's math department

Spin Analytical — *Kittery, ME*

PROGRAMMING INTERN — *Jun.-Aug. 2017, 2018, 2019*

- Coded multiple Qt5 GUI programs for Raspberry Pi using C++ and Boot2Qt
- Ported and improved data analysis application which calculated electrophoretic mobility of a macromolecule to Qt5
- Developed multithreaded Qt5 application which interfaced with several hardware devices to control a custom instrument used in drug synthesis
- Wrote 20-page user manual for aforementioned multithreaded Qt5 application in LaTeX

Projects and Activities

Competitive Programming — *Dec. 2014-Present*

- Competed in several competitions where one solves complex problems using algorithms and data structures
- Currently candidate master on CodeForces, 5-star rating on CodeChef
- Placed 1001st in the world in Google Code Jam Round 2 2020
- Competed in Platinum division of USACO during high school

Permit Log — *Jan. 2017-Dec. 2018*

- Mobile app which helped Maine learner's permit holders track hours of required driving practice
- Created Android app in team of three high school students using Android Studio, Java, and Firebase
- Won first place in Maine App Challenge 2017
- Maintained on Google Play Store from Feb. 2017-Dec. 2018, had 6000 users at peak

References Available Upon Request