# KIM HANCOCK

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### **EDUCATION**

Bowdoin College, Brunswick, ME. Expected graduation May 2021.

Majors: Math and Computer Science, Global/Asian Studies

Relevant Coursework: Optimization, Computer Systems, Computational Game Theory, Real Analysis, Data Structures, Algorithms,

**Differential Equations** 

GPA: 3.94

Awards: Girl Scout Gold Award, Kibbe Science Fellowship, 100π-ε Math Award, Sarah and James Bowdoin Book Award

#### EXPERIENCE

IBM Armonk, NY June 2020 - August 2020

Cyber Security Intern

- Chief Information Security Officer (CISO) intern in the Standards and Governance department with a focus on software development.
- Worked with a team of interns to develop a web app which acts as a centralized body of knowledge for IBM cyber security policy and guidelines coming from a variety of data sources. Employees can ask questions and be directed to relevent results.
- · Gained knowledge of IBM cloud infrastructure including Watson Discovery, used for natural language processing and AI training.

## Bowdoin College Brunswick, ME

July 2019-present

Student Researcher

- Conduct Computer Science research on influence maximization over social networks, which is an NP-complete problem.
- Analyzed large data sets, both computer-generated and Facebook graphs from SNAP, testing numerous methods of maximizing total node weight through linear programming, dynamic programming, etc.
- Developed an AI algorithm to select a subset of nodes which yields the highest payoff.
- Analyzed and proved the run-time and efficiency of these approximation algorithms.

#### Clemson University Clemson, SC

May-June 2019

Student Researcher

- Conducted mathematics research with a team of five on the flow of information across multiple unicast networks.
- Analyzed trends among large classes of networks with interference; proved numerous theorems to be submitted for publishing
- · Executed programs in Magma and Java using concepts from Graph Theory, Linear Algebra, and Abstract Algebra

### Center for Learning and Teaching Brunswick, ME

January 2018-present

- Competitively selected to tutor Bowdoin students in any Calculus course
- Teaching Assistant for multivariate calculus, planning weekly review sessions and grading assignments.

## **ACTIVITIES AND INTERESTS**

# **Portland Housing Authority**

October 2018-December 2019

• President of Portland Housing Authority, a club that volunteers at the Study Center for PHA. We come in twice a week and help the students with homework, play games, read books, etc.

Bowdoin Outing Club September 2017-present

- Completed the club's Leadership Training program, including Wilderness First Responder training
- Lead freshman orientation trips and weekend trips during the school year

Yoga Instructor September 2015-December 2019

• Teach yoga on a volunteer basis at Bowdoin and in the local community weekly.

### **Association for Women in Mathematics**

September 2018 - present

• Opened a chapter of AWM on Bowdoin's campus. Organize math talks, weekly meetings, and conferences.

#### **SKILLS**