Ishaq Kothari

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ishaqkothari.github.io

EDUCATION

Oberlin College and Conservatory — Oberlin, Ohio
Bachelor of Arts (Expected May 2023), **GPA: 3.95** — *September 2020-Present*

- **Majors**: 3-2 Engineering, Mathematics; **Minors**: Computer Science, Physics, Environmental Studies
- **Relevant Coursework:** Linear Algebra, Multivariable Calculus, Probabilistic Modeling & Machine Learning, Mathematics of Climate Modeling, Discrete Mathematics, Differential Equations, Data Structures, Systems Programming, Human Computing Interaction, Mechanics and Relativity, Electricity and Magnetism

SKILLS

Technical

- **Languages** - Python, C, C++, Java, Bash Scripting, Latex, Markdown, Mathematica
- **Machine Learning** - Bayesian Statistics, Neural Networks, Kernel Methods, Unsupervised Learning
- **Tools/Frameworks** - Pandas, Numpy, Scikit-learn, Eigen, Git, Vim, Linux

General

- **Language** - English, Spanish, Gujarati, Hindi

PROJECTS

- Modeling Global CO_2 Growth Rate with Land Loss Indicators using Lasso Polynomial Regression, Ridge Polynomial Regression, and Recurrent Neural Networks — *Winter 2021*
- Naive Bayesian Classifier Algorithm (with Gaussian and MLE options) written in C++. — *Autumn 2021*
- K-Nearest-Neighbors Classifier Algorithm (utilizing cross-validation) written in C++. — *Autumn 2021*

EXPERIENCE

Oberlin College — Oberlin, Ohio
Teaching Assistant — *September 2021-Present*

- Hosted regular drop-in sessions to provide supplementary instruction on various linear algebra topics under the direction of Professor Nathan Gray and Professor Chris Marx.

Michigan Technological University — Houghton, Michigan
Research Assistant — *June 2022-August 2022*

- Worked on designed mathematical libraries in JavaScript and TypeScript for a metalanguage to support underwater sensor data under the direction of Professor Charles Wallace. Funded by SBIR Award N68335-21-C-0187.

WOBC 91.5 Community Radio — Oberlin, Ohio
Webmaster — *January 2021-Present*

- Maintained website built using PHP, CSS and HTML for community radio station.

Oberlin College — Oberlin, Ohio
Student Researcher — *Winter 2021-Present*

- Conducted climate modeling research, and presented findings bi-weekly under the direction of Dr. James Walsh for Winter Term project.

Rochester Table Tennis Coaching — Rochester, New York
Software Engineering Intern — *Winter 2020*

- Designed and configured a media server using Apache and NodeJS for a computer vision device to store and transfer live video feeds to a web server. Helped design the company website using Moodle.

PUBLICATIONS

- Kothari,Ishaq. Race for Post Quantum Cryptography: Quantum Computing and Cyber Security," *Synapse Intercollegiate Science Magazine*, Oberlin College, February 2, 2021.

AWARDS

- John Frederick Oberlin Scholarship — *Spring 2020*
- AP Scholar with Distinction — *Spring 2020*