# HOPE G. NEVEUX

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#### **SKILL HIGHLIGHT**

- · R, Python, Java, HTML, CSS, JS, SQL, SQLite, bash, git, LaTeX
- · ggplot2, D3, Bootstrap, Tableau, SPSS Modeler, Docker
- · Scikit-Learn, NumPy, Pandas, Matplotlib, Seaborn, BeautifulSoup
- · Machine Learning (Python) & Mathematical Modeling (R)
- · Artificial Intelligence & Algorithms (Java)
- · Software Development (Java, Python)

- · Data Mining, Predictive Analytics (Python, SPSS)
- · Interactive Data Visualization (HTML, CSS, JS)
- · Linear Algebra & Multivariable Calculus
- · Normal & Partial Differential Equations
- · Bayesian and Frequentist Statistics (R)
- · IBM Poughkeepsie 2021 Datathon 2nd Place

#### **EDUCATION**

#### HARVARD UNIVERSITY | Master of Science

Major: Data Science

**Duration:** Aug 2022 - May 2024

MARIST COLLEGE | Bachelor of Science (Summa Cum Laude)

Majors: Applied Mathematics, Data Science & Analytics Concentrations: Computer Science, Actuarial Science

Conferred: May 2022

#### **ORGANIZATIONS & LEADERSHIP**

- · Alpha Chi (Since May 2022)
- · Pi Mu Epsilon (Since Apr 2021)
- · Association for Women in Mathematics
- · Marist Math Club President (2021 2022)
- · Marist Math Club Media Director (2020 2021)
- · Marist AWM Secretary (2021 2022)
- · New Hampshire Scholar (Since 2018)

#### **EXPERIENCE**

#### 3D PRINTING CORE STUDENT SPECIALIST | Harvard University

· Support the SEAS 3D printing research core in running and processing research models submitted by other labs and outside contractors.

# MARKOV CHAINS AND ABSTRACT STRATEGY GAMES RESEARCHER | Polymath Jr

· Used random process, mathematical, and computational methods to build, describe, and compare the accessible solution space of two movement-based games for strategic planning. Presented alongside colleagues at the Polymath Jr. Conference and NCUWM, and alone at the Marist REU Panel.

· Promoted to Head Tutor during 2021 - 2022 academic year. Individual and group tutoring in a tutoring center staffed by upperclassman. Supported all offered math courses. Helped with homework, quiz review, lecture material, and examples pertaining to course and instructor style.

#### Allston, MA

Sep 2022 - Present

#### Remote

Jun 2021 - Aug 2021

#### MATH LAB TUTOR | Marist College, School of Computer Science & Mathematics Poughkeepsie, NY

Sep 2020 - May 2022

#### RESEARCH PROJECTS

#### COSMOLOGICAL EFFECTS ON SEISMIC PLATE SHIFTING | Harvard University, Data Science I

· Exploration, design, and tuning of data models to predict earthquake magnitude and prevalence based on gravitational behavior of the Sun, Moon, and Jupiter on Earth's tides in conjunction with webscrapped naval data.

Allston, MA Fall 2021

#### ADAPTIVE INFECTION SIMULATOR (AIS) | Marist College, Department of Computer Science

· Multi-stage pooled testing infection simulator built in Java as independent research under supervision of Dr. Alan Labouseur. Based on variable infection rates, population sizes, pool sizes, testing sensitivity, and testing specificity. Analyzes testing architecture and test usage via Bayesian statistics. Presented at NYCWiC 2022, invited to speak at the Explorations in Social Justice Conference 2022.

Poughkeepsie, NY Apr 2021 - Apr 2022

## EVOLUTION OF MUSIC OVER FOUR MODERN DECADES | Marist College, Data Mining & Predictive Analytics

· Course project employing and evaluating Multiple Linear Regression, C5.0 Decision Trees, and Bayesian Networks to build multiple profiles for prominent musical attributes associated with song popularity during the 1980's, 1990's, 2000's, and 2010's.

Poughkeepsie, NY Spring 2021

### ANTHROPOGENIC EFFECTS ON STREAM PH | Marist College, Bayesian Analysis

· Course project on bayesian versus frequentist statistical analyses in R of local water quality data. Considered models of selective differences and multi-site contrasts to examine anthropogenic effects on fluvial systems.

## Poughkeepsie, NY Fall 2020