

Hussein Bitambuka

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EDUCATION

Master of Science in Mathematics, Thesis Track

East Texas A&M University, Dept. of Mathematics | Commerce, TX | Expected May 2028

- Graduate Assistant, Department of Mathematics
- Coursework: Math 531 (Matrix Theory), Math 569 (Image Analysis, Recognition and Learning)

Bachelor of Science in Computer Science & Data Science and Analytics

Marist University, School of Computer Science & Mathematics | Poughkeepsie, NY | May 2025

- Double major: Computer Science and Data Science and Analytics (Mathematics department)
- Minor in Mathematics and Enterprise Computing; Concentration in Software Development
- Mastercard Foundation Scholar — full merit scholarship, globally competitive award
- Coursework: Machine Learning, Deep Learning, Data Mining & Predictive Analytics, Linear Algebra, Probability & Statistics, Applied Statistics, Calculus I-III, Algorithm Analysis, Quantum Computing Algorithms

HONORS & AWARDS

Mastercard Foundation Scholars Program

Mastercard Foundation | Marist University | 2021 – 2025

- Full merit scholarship covering tuition, housing, and living expenses for the full duration of undergraduate study.
- Awarded to approximately 200 students globally per year from Africa, selected for academic excellence, demonstrated leadership potential, and commitment to giving back to their communities.

Full-Time Offer — Deep Learning Compilers Team

IBM | 2024

- Received a competitive full-time offer to join IBM's deep learning compilers engineering team, a highly specialized role at the intersection of machine learning systems and compiler design.
- Offer declined due to visa limitations.

PROFESSIONAL EXPERIENCE

Software Engineer Intern — Quantitative Investment Strategy

Goldman Sachs | Asset & Wealth Management | Manhattan, NY | Summer 2024

- Rebuilt the firm's ETF Portfolio Composition File (PCF) parsing system, reducing end-to-end processing time from 45 minutes to under 2 minutes, a 95% performance improvement.
- The system parsed PCF files from the Bank of New York, enabling Portfolio Managers to view basket compositions in near real-time and act on discrepancies such as missing or misidentified securities.
- Implemented in GS's internal proprietary language; collaborated closely with Portfolio Managers to ensure output aligned with investment workflows and reporting requirements.
- Improved PMs' ability to communicate with the Bank of New York on basket exceptions, directly supporting the integrity of ETF operations.

Software Engineer & Data Specialist

Legacy Louisiana | Remote | February 2025 – Present

- Building a full-stack estate planning platform that enables attorneys to automatically generate client reports directly from structured data, eliminating the need for manual drafting.
- Designed the platform's data architecture to support complex asset portfolio management, will drafting, and posthumous distribution workflows.
- Collaborated with legal experts to ensure compliance with estate law and data security requirements.

TEACHING EXPERIENCE

Lead Instructor — Computer Science & AI

Tujenge Africa Foundation | Remote | Burundi | January – May 2025

- Designed and delivered an introductory Computer Science and AI curriculum from scratch for students in Burundi with no prior CS background.
- Students preparing to begin college in fall 2025 at institutions including Harvard, Yale, Brown, Cornell, Vanderbilt, Northwestern, and Smith College, among others.
- Built an educational video-sharing platform with content tracking and interactive features to extend learning beyond the classroom.

Calculus Teacher

Secondary School | Burundi | 2018 – 2021

- Prepared students for the highly competitive medical and engineering entrance examinations at the University of Burundi over three years.
- Achieved a 90% university admission rate, with the majority of students successfully entering medical and engineering programs.
- Developed strong mathematical communication and pedagogical skills through sustained, high-stakes classroom instruction.

LEADERSHIP & SERVICE

President — Marist African Student Association

Marist University | Poughkeepsie, NY | January 2022 – May 2025

- Directed "Mon Afrique," Marist's largest multicultural event, drawing 400+ attendees including students, faculty, staff, and the college president.
- Managed the organization's annual budget and oversaw allocation for events and operations.
- Led membership growth, event planning, and cultural programming to strengthen campus community engagement.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, TypeScript, Java, SQL, C, C++

ML & Data Science: TensorFlow, PyTorch, Pandas, NumPy, Scikit-learn, Jupyter

Web & Infrastructure: Flask, MongoDB, PostgreSQL, SingleStore, AWS, NGINX, Git

Mathematics: Linear Algebra, Probability & Statistics, Calculus, Discrete Mathematics, Numerical Methods

Languages: English (fluent), French (fluent), Kirundi (native), Kiswahili (native), Arabic (conversational)