Diallo Molina

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Rensselaer Polytechnic Institute, Troy, NY

Bachelors of Science in Biomedical Engineering GPA: 3.0 Concentrations: Medical Devices & Data Science

PROJECTS

DEBUT: Orchestrated a team to devise a sensory device for peripheral neuropathy detection, leading to a novel haptic feedback prototype for numb extremities. Personally worked on component integration & arduino code.

BME Capstone: Transformed Coulter College project into an award winning atrial fibrillation detection device, leading to provisional patent and team selection for MBA life entrepreneurship endorsement. Personal contributions include machine learning algorithms, firmware code, and team management.

PoSsE: Engineered user-interface and firmware for a prototype Police Surveillance Drone, facilitating mobile, real-time criminal activity monitoring. Personal contributions included user interface and firmware architecture, achieving user-minded controllability of its various drone subsystems.

LLM Optimization & Kernel Development: Memory-efficient backprop, fine tuning optimizations, & Triton kernel development.

LEADERSHIP

Presidency in Biomedical Engineering Society: Led a board of 8 other individuals to provide value to RPI's cohort, increasing attendance by 100% from prior year and multiple company-sponsored events.

Startup Development: Lead BME Capstone Project through customer discovery, business planning, and research and development for real world applications, leading to EiR Experience with RPI

Alpha Sigma Phi: Maintained three positions of high responsibility simultaneously, coordinating alumni and brother formal events consisting of over 50 individuals, and entrusted to manage and budget accounts of over $50,000 over the course of a year.

WORK EXPERIENCE

Entrepreneur In Residence - Rensselaer Polytechnic Institute   **May 2024 - December 2024**

- Multidisciplinary team led to innovate, promote, and push into market a novel optics-based wearable medical device for heart disease detection with RPI and NSF funding.

Team Lead – BMES Coulter College Medtronic   **May 2023 – August 2023**

- Led a multidisciplinary team to develop an atrial fibrillation detection device, focusing on research, prototyping, and iterative design. Delivered structured milestones over 3 months, including technical presentations and prototype testing to meet Medtronic's expectations.
- Achieved Best Design Award from Medtronic, recognizing innovation and effectiveness of the final solution.

Founding Engineer - Troy Tutors   **May 2022 – May 2024**

- Worked closely with the CEO for strategic brainstorming and plan execution during startup phase
- Involved in creating BME Pro, an all-inclusive course curriculum for tutoring biomedical engineering
- Contributed to the development of Collablab, a software for group communication and collaboration on projects, through Testing and Validation.
- Demonstrated strong communication skills by tutoring biomedical engineering classes and imparting critical engineering concepts.

SKILLS

- **Data Analysis & Programming:** Python, C++. Matlab, TensorFlow (NLP), NumPy, Lean 4
- **Engineering:** Competent Solidworks/AutoCAD, Embedded Systems Development, Circuit Design.
- **Communication:** Public Speaking, Technical Presentations and Papers.