Jeanmarck R. Ceant

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Education

New York University, College of Arts and Science & Tandon School of Engineering
Manhattan, NY and Brooklyn, NY
Bachelor of Science in Computer Science and Electrical Engineering *May 2027*

Technical Skills

Languages: C, C++, Assembly (x86-64), Java, Python, HTML, JavaScript, CSS
Tools/Technologies: TensorFlow, PyTorch, Pandas, NumPy, Matplotlib, Seaborn, SciPy, Docker, VMs, Git/GitHub
Platforms/Hardware: Windows/Linux/UNIX, Raspberry Pi, Microcontrollers, Electrical Circuits

Projects

Project Rene Biotech Food Analysis Application *Aug. 2024 – Present*

- Led the development of an AI-powered grocery item detection system using YOLOv8 for object detection and SAM2 for advanced segmentation, addressing challenges such as occlusion and overlapping items to deliver real-time nutritional analysis for consumers and retailers.
- Integrated the federal government's OpenFDA APIs and collaborated with teammates via GitHub for version control and task management, ensuring transparent, reliable data for consumer health choices and efficient project progress tracking.
- Implemented a color-coded health flagging system using Python and Matplotlib, assisting shoppers in making instant, informed dietary decisions at grocery stores.
- Optimized model training using TensorFlow with diverse datasets, ensuring adaptability and consistently high performance across varied grocery environments.

NYU Datathon – 1st Place Winner *Apr. 2024*

- Developed a neural network using ResNet-18 to classify warehouse development phases from satellite imagery, achieving high accuracy in identifying stages of construction.
- Predicted future development and projected completion dates for Atlanta over the next four quarters, providing actionable insights for urban planning.
- Applied Python and transfer learning techniques to deliver a high-performing model in a competitive environment, securing 1st place in the datathon.

Smart Watering System Automation (Raspberry Pi, IoT Sensors) *Jan. 2023*

- Co-designed a smart watering system framework using Raspberry Pi, selecting components to monitor and automate plant care, and created a 3D model of the hardware layout in Autodesk Fusion for efficient sensor placement.
- Implemented moisture-sensing systems with IoT sensors, ensuring accurate real-time data on soil moisture levels to guide irrigation decisions based on environmental conditions.
- Programmed in C to handle signal processing and data transcription, enabling reliable communication between hardware and software components and ensuring the system's adaptability and automation capabilities.

Experience

CRI Research Intern, NYU Langone (Full-Time) *Jun. 2024 – Present*

- Developed and optimized a data processing program to visualize, analyze, and perform non-targeted analysis on plasma datasets, focusing on differences between women with and without recurrent pregnancy loss.
- Utilized virtual machines to install and configure MS-DIAL 4, ensuring compatibility for large-scale data processing and statistical accuracy.
- Collaborated with biomedical researchers to identify biomarkers and patterns, providing insights into potential causes of recurrent pregnancy loss and supporting clinical research objectives.

CSTEP Math Instructor (Full-Time) *Jul. 2024*

- Taught Algebra 2 through engaging, student-centered methods, enhancing comprehension and academic performance.
- Onboarded and mentored new students, demonstrating strong communication, empathy, and leadership skills transferable to diverse educational settings.

CRI Research Intern, NYU Tandon (Part-Time) *Sept. 2023 – May 2024*

- Developed a Python-based program leveraging Difference-in-Differences (DiD) methodology to assess the causal impact of gun laws on public safety metrics, identifying key trends and effects.
- Designed and implemented a data collection pipeline to aggregate datasets from government databases and public repositories, standardizing the data for robust statistical analysis.
- Performed statistical analysis and created detailed visualizations using Matplotlib, presenting findings on the effectiveness of gun laws to inform evidence-based policy recommendations.