Jessica Hernandez

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EDUCATION

Georgia Institute of Technology   **Atlanta, Georgia**
Bachelor of Science in Computer Science,   *August 2020 – December 2024*
- **Concentrations**: Intelligence (AI) and Modeling & Simulation
- **Double minor**: French and Health & Medical Sciences (HMED)
- **GPA:** 3.47/4. *Dean's list*

Technische Universität Berlin   **Berlin, Germany**
Study Abroad Program in Computer Science   *May 2022– July 2022*
- **Scholarship**: Barrett & Carolyn Carson Intl. Scholarship

PROJECTS

GBA Moon Lander Game   **Atlanta, Georgia**
Developed game for a Game Boy Advance emulator in C in 1 week   *November 2022*
- Individual project that involved developing collision detection, low-level programming, and bitwise operations
- Created custom graphics for game, added artificial gravity, implemented working finite state machine
- Optimized code for smooth gameplay experience

CNN - Classification of MRI Images   **Berlin, Germany**
Trained a classifier that estimates extent of dementia progression in a patient using an MRI scan   *July 2022*
- Developed a model with two Conv2d layers, Max Pooling, and dropout layers to address overfitting
- Achieved a testing accuracy of 65% by addressing overfitting through dropout layers and optimizing hyperparameters
- Collaborated to preprocess a dataset of 6400 MRI images, implementing a custom weighted random sampler

Drone Delivery Service Program   **Berlin, Germany**
Simulation of a drone delivery service program in Java 8   *May 2022 – July 2022*
- Collaborated with group of 4 to complete a large-scale 5000+ lines of code programming project in an agile environment
- Troubleshooted software by writing unit test cases and produced a comprehensive project report
- Decreased user input errors by implementing JavaFX GUI

Guinea Worm Disease Filter Bucket Prototype   **Atlanta, Georgia**
Helped the Carter Center eradicate Guinea Worm Disease (GWD) in the country of Chad   *August 2020 – December 2020*
- Investigated factors that contributed to the spread of GWD including human factors and location
- Utilized an iterative design process that emphasized the fundamentals of engineering and empathetic design process
- Collaborated with team members to develop the Filter Bucket: a cost-effective filtration device that uses a simple design to allow people to collect and filter water in one place

EXPERIENCE

Peer-Led Undergraduate Study (PLUS)   **Georgia Tech Tutoring & Academic Support (TAS)**
Mentor   *August 2023 – Present*
- Facilitated bi-weekly meetings with small group to discuss departmental updates, provide additional training, and create a sense of community for staff to discuss experience and network
- Oversaw the scheduling and sessions of mentees

Leader   *August 2022 – Present*
- Improved student grades by one-half to one full letter grade through bi-weekly review sessions for class of 1300 students
- Led exam review sessions of ~300 people with two other PLUS leaders
- Created session material in conjunction with head teaching assistant and course professor

Chip-Scale Power Supercapacitor Research   **Georgia Tech Research Institute (GTRI)**
Research Assistant   *August 2021 – December 2021*
- Worked with PhD student Julia Allen to fabricate supercapacitors to provide high-power energy storage for low-volume and low-weight microelectronics systems
- Used clean room tools to manufacture silicon wafers with carbon nanotubes, facilitating the assembly of supercapacitors
- Collaborated with team members to present information to members from NASA's Marshal Space Flight Center

SKILLS

- **Programing:**   Java, MATLAB, Python, C
- **Tools**   CircuitSim, Docker, VM VirtualBox, Git Bash, GitHub, Linux
- **Languages:**   French (fluent), Spanish (native), English (native)
- **Relevant Coursework:**   Data Structures and Algorithms, Design and Analysis of Algorithms, Object Oriented Programming, Artificial Intelligence, Machine Learning, Differential Eq.

AWARDS & CERTIFICATIONS

- ITTPC (International Tutor Training Program Certification) II   *December 2022*
- NSA HackGT 9 challenge with over 1300+ competitors – **2nd place**   *October 2022*