Stanley Celestin

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EDUCATION

Doctor of Philosophy in Computer Science **May 2024**
Cornell University, Ithaca, New York

Bachelor of Science in Computer Engineering **May 2019**
University of Florida, Gainesville, Florida

Areas of Interests: Robotics, Human-Robot Interaction, Artificial Intelligence, Machine Learning

Languages: English (Proficient), Haitian Creole (Fluent), French (Conversational), Spanish (Basic)

RELEVANT EXPERIENCE & RESEARCH

Human-Robot Collaboration & Companionship Lab, Researcher – *Ithaca, NY* **October 2020 – Current**

- Evaluating various unimodal and multimodal systems for intention recognition in human-robot interaction in order to further sociability
- Investigating new models for team interaction for artificial intelligence to help teams succeed
- Developing artificial social intelligence for successful teams through search and rescue tasks

MIT-IBM Watson AI Lab, PHD Research Intern – (Virtual) *Cambridge, MA* **May 2021 – August 2021**

- Deployed machine learning models on microcontrollers with resource constrains (memory, storage, compute power, latency)

SoundPad Lab, Researcher – *Gainesville, FL* **August 2018 – May 2019**

- Examining the proper user interfaces in virtual reality that will enable users to know when to turn to see something that is not in their line of sight
- Determine how music, specifically Greek musical modes, convey emotion in a neural basis

Microsoft Research, Research Intern – *Redmond, WA* **May 2018 – August 2018**

- Design and implemented a system that combines Microsoft Airsim and Facebook Detectron to do real time object detection and classification in a simulated environment
- Determine where current models fail to update training data and algorithms for better performance

General Electric, Technical Product Management Intern – *San Ramon, CA* **May 2017 – August 2017**

- Utilizing AWS Lambda to implement a server-less backend infrastructure for GE's Predix Analytic Catalog in Python
- Refactoring Predix Catalog to ReactJS to create a web application that is faster and has better user experience

Human Experience Research Lab's Brain Drone Race, Researcher – *Gainesville, FL* **August 2016 – April 2017**

- Utilizing an electroencephalogram (EEG) device to filter brain signals and map it to correct commands that will in turn control the drone
- Implementing computer vision in the DJI phantom SDK and developing a machine algorithm to increase the stability of the drone in flight

General Electric Power, Controls System Engineer Intern – *Greenville, SC* **May 2016 – August 2016**

- Developed company software that automates the requisition process for gas turbines systems logic design

- Created customized control logic for customer sites ranging from Anti-Icing systems to Seal Oil Pump Systems

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SELECTED PROJECTS

Autonomous Mobile Robot, Cornell University **March 2020 – May 2020**

- Competed in competition for autonomous mobile robot's course covering sensing, localization, mapping, and planning to navigate a course visiting destination points, staying away from certain points, and discovering information about the environment map
- Responsible for control and path planning using rapidly exploring random tree
- Place 2nd out of 13 graduate student groups

Whose Turn is it Anyway?, Cornell University **March 2020 – May 2020**

- Applied a finite-state turn taking model to non-speech turn taking phenomena to test 2009 Raux and Ekenazi published paper titled "A finite-state turn-taking model for spoken dialog systems"

GliderHack, Microsoft Hackathon **June 2018**

- Developed telemetry software for the Arduino Teensy Board to navigate a glider using thermal information to maintain time in air

Sky Cam, Python & Tensorflow **February 2018 – April 2019**

- Developed learning algorithm that recognizes red cars, white cars, pools, and lakes from aerial images
- Utilized convolution neural network to train on 20x20 samples of objects of interests
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Evalumate, MEAN Stack – *Scrum Master* **August 2017 – December 2017**

- Led a team of seven in the development of a web-application that allows users to gage different aspects of their emotional and relational state by taking emotional maturity assessments and romantic attraction assessments
- Responsible for developing the assessments module end to end and the base application that is the foundation for other features the group is working on

Career Game, MEAN Stack - 1st *Place NSBE Region 3 Hackathon* **November 2017**

- Created web application for students to share successful steps that lead to a professional opportunity to help up and coming professionals to reach similar success
- Featured company specific artificial intelligent agent relaying relevant company information such as company culture to user through a messaging interface

Webscraper & Webcrawler, Python **May 2017 – August 2017**

- Creating script that starts at an initial iTunes app online, scrapes for all suggested apps, follows those apps to a certain depth levels, and return a list of all suggested apps

Text Threat Assessment, Programming Fundamentals I **September 2015 – October 2015**

- Created a program that filters text messaging content, based on set criteria, to determine if a student is likely to be a crime suspect
- Versioned this program to determine crime likeliness using a time, location, and heart rate filter

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LEADERSHIP & INVOLVEMENT

Management Leaders for Tomorrow, Program Fellow **July 2016 – November 2017**

- Selected as one of 350 for an 18-month professional development program for high-achieving diverse talent completing business case studies and intensive assignments to hone analytical, quantitative and communication skills
- Participate in four seminars hosted by industry leaders, such as Deloitte, Google, Goldman Sachs, Procter & Gamble and Target

National Society of Black Engineers, Secretary **April 2016 – April 2017**
- Collaborate with the executive officers to determine actions necessary to continue the growth of the gator chapter
- Lead a team of five responsible for communication to over 200 members for events, meetings, and programs via email blasts, social media engagement, and tabling

University of Florida's Institute of Black Culture, Ambassador – *Gainesville, FL* **October 2014 – October 2016**
- Organize event themes, staffing, venues and promotion for weekly to semester programs, Events include: think tanks, leadership conferences, and culturally engagements focused on the Black experience at the University of Florida
- Maintain front office efficiency and organization through printing documents and servicing anyone that visits

National Society of Black Engineers, Benton Engineering Council Rep & Senator **April 2015 – April 2016**
- Responsible for informing e-board and general body members of activities within the College of Engineering and regional conference
- Relay information to NSBE chapter executive through emails and direct meetings to keep good relations with the council

National Society of Black Engineers, Committee Member **September 2014 – April 2015**
- Aided in coordination of the logistics for Fall Regional Conference that resulted in bringing over 40 members to the conference
- Participated in TORCH, in which small engineering projects were brought to children in Gainesville at the Eastside Recreational Complex

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TEACHING & VOLUNTEERING

Lead Instructor, Hacktavist– *Gainesville, Florida* **February 2018 – April 2018**
- Taught programming and computer science fundamentals to engineering students at the University of Florida using Python to introduce students to natural language processing

Lead Instructor, Code It Day – *Gainesville, Florida* **March 2018**
- Taught programming and computer science to elementary and middle school students in Gainesville
- Utilized kit to teach students how to put a computer together and the basic building blocks of programming, from variables to loops and lists

Assistant Instructor, P4H Global – *Cap Haitian, Haiti* **May 2018**
- Plan and engage in sustainable programs ranging from youth leadership development, children's activities, health education, and English language practice
- Served as translator between creole speakers and non-creole speakers

Assistant Instructor, Hidden Genius – *Oakland, California* **June 2017**
- Assisted in teaching Python and walking students through examples within the context of preparing a data set for fitting a ML algorithm

- Taught high level overview of Machine Learning principles with explanation and tutorial of linear regression

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SKILLS & RELEVANT COURSES

- **Languages:** Java, C++, Swift, Python, NodeJS, AngularJS, ReactJS, CSS, HTML, Django
- **Frameworks & Libraries:** MongoDB, Express, Bootstrap, CSS, AWS, Tensorflow, Git, Anaconda, Spyder, Jupyter
- **Computer Science:** Data Structures & Algorithms, Discrete Math, Natural Language Processing, Artificial Intelligence, Computer Organization
- **Electrical Engineering:** Statistics and Probability, Machine Learning, Digital Logic Microprocessors, Signals and Systems, Circuits

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FELLOSHIPS, AWARDS, & HONORS

- Alfred P. Sloan Foundation Fellowship, *Cornell University*
- Machen Florida Opportunity Scholar
- Florida Bright Futures Medallion Scholar
- John Deere Corporate Scholar
- NSBE Fulfilling the Legacy Scholar
- Chevron Corporate Scholar
- General Electric AAF/Lloyd Trotter Scholar
- Northrop Grumman Corporate Scholar
- Lockheed Martin Corporate Scholar