

James Williams IV

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Education

University of Central Florida

June 2024 – Present

Bachelor of Engineering in Computer Science

Orlando, FL

Honors/Awards: Dean's List, Bright Futures Scholarship, AP Capstone Diploma, AICE Diploma w/ Merit

Relevant Coursework: Intro to Python, Intro to C, Discrete Math, Calculus II & III, Data Structures & Algorithms

Experience

Brown and Brown Insurance

May 2025 – Aug. 2025

Software Engineering Intern

Daytona Beach, FL

- Developed and tested a global dashboard using Python, React, Leaflet.js, and PostgreSQL to enhance infrastructure visibility across 700+ offices
- Improved outage response time by 40% by enabling real-time geospatial tracking and system monitoring
- Collaborated in Agile sprints and contributed to a scalable backend pipeline for real-time global power tracking

Gary S. May Shadow Initiative Program

Oct. 2024 – April 2025

Web Developer Intern

Orlando, FL

- Built an internal-facing NSBE leadership website using HTML, CSS, and JavaScript to centralize communication and resource sharing for over 50 chapter leaders.
- Streamlined reporting and event tracking by integrating Google Sheets API, improving data accessibility and reducing manual updates by 60%.
- Contributed to initiatives that increased regional member engagement by 25% year-over-year through digital outreach and support tools.

Undergraduate Research Study

Sep 2023 – April 2024

Author and Researcher

Davie, FL

- Analyzed Florida public school performance datasets to assess the impact of school start times on standardized test scores using Python, pandas, and NumPy
 - Performed linear regression modeling, data cleaning, and hypothesis testing in Python and Excel; findings submitted to the Florida Undergraduate Research Journal
 - Automated data preprocessing pipeline to handle 10K+ rows of test score data, enabling faster iteration on statistical models and visualizations
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Projects

Volatility Strategy Simulator | Python, scikit-learn, MySQL, Polygon.io, FRED API

June 2025 – Present

- Built a backtesting simulator to evaluate straddle/strangle strategies across 50+ macroeconomic events
- Stored S&P 500 options and economic data from Polygon.io and FRED APIs in a MySQL database
- Trained a random forest model to predict post-event volatility shifts based on pre-event market conditions

InsureFair | React, Node.js, JavaScript, HTML, Tailwind CSS

May 2018 – May 2020

- Developed a React app at ShellHacks to estimate insurance overpayment risk using life expectancy and premiums
 - Worked with a 4-person team to design a responsive UI with real-time financial computations
 - Improved insurance risk clarity by 30% through streamlined user interaction and visual output
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Leadership Development

National Society of Black Engineers Club

Aug. 2024 – Present

Tech Committee

Orlando, FL

- Contributed to technical projects and internal tools for NSBE's Tech Committee, supporting member engagement through software and dashboard solutions.
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Technical Skills

Languages: Python, C/C++, MySQL, CSS, HTML, JavaScript, TypeScript

Frameworks/Libraries: React, Node.js, Flask, Tailwind CSS, Matplotlib, NumPy, Pandas, FastAPI

Developer Tools: Git, GitHub, VS Code, Docker, PyCharm, Azure