Jayson Johnson

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EDUCATION

Howard University Washington D.C

B.S. in Mechanical Engineering; ***GPA: 3.96/4.00*** *Jun 2026 (Expected)*

Minors in Computer Science & Math

RELEVANT COURSEWORK

Major coursework: MIT DSML, Calculus I-III, Differential Equations, Materials Science, Physics I-II, Principles of Electronics, Intro to Engineering Computations, Intro to Computer Aided Design, Statics, Dynamics, Solid Mechanics, Manufacturing, Mechanical Design, Fluid Mechanics, Thermodynamics

Minor coursework: Computer Science (C++), Proofs and Problem Solving, Computer Science (Python)

RESEARCH EXPERIENCE

Hypersonics Research Laboratory - MIT Cambridge, Massachusetts

Undergraduate Research Experience *Jun 2024 – Present*

- Worked on Shape Enhanced Aerodynamic Dust Removal (SEADR) using computer vision, ML & AI, and ANSYS fluent to design the next generation self-cleaning solar panel.
- Improved CFD simulation speeds by 200,000 times by developing a reduced ordered model that estimated pressure on the solar panels within 0.28% accuracy.

NSF PARADIM - Johns Hopkins University Baltimore, Maryland

Undergraduate Research Experience *Jun 2023 – Present*

- ACS Published: Amalgams as Hydrogen-Free Reducing Agents for Topotactic Oxide Deintercalation - April 2024
- Incorporated machine learning to develop a model that predicts the phase change of oxides.
- Trained to operate machinery such as the high pressure floating zone, glove boxes, and X-ray diffractometer.

@FTERLAB - Howard University Washington D.C

Undergraduate Research Assistant *Jun 2022 – Present*

- Working with NASA, conducted simulations for the Trans-Iron Galactic Element Recorder for the International Space Station (TIGERISS) a payload of the ISS using thermal desktop.
- Won $200 in the ASME IMECE conference in Exposition Undergraduate Research and Design Expo Student Poster Competition for my hypersonics research.

PROFESSIONAL EXPERIENCE

Rooted: University Hub | ●*Website* | *iOS App* | *Google Play App*

- Co-founded Tree Technologies, a company focused on developing innovative digital applications for universities.
- Developed mobile app with 300 users that enables students to seamlessly connect with Howard University's technology infrastructure.
- Built using React Native and AWS, encompassing both the frontend and backend of the application.
- Gained $20,000 in funding by winning first place against 68 other participants at the HU Empower Pitch Competition.

AWARDS & ACHIEVEMENTS

Vivien Thomas Scholar: Selected as the only Howard University nominee for 2023.

Karsh STEM Scholar: Cohort 6 of the Howard University Karsh STEM Scholars Program

SKILLS

Programming: Kotlin, C++, Javascript (React Native), Python, MATLAB

Developer tools: VS Code, Xcode, Android Studio, GitHub, Autodesk, Microsoft suite, AWS

Simulation tools: ANSYS, Thermal Desktop, Solidworks

Interests: Weightlifting, gymnastics, improving my cooking skills