

Tarence Rice

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Objective Statement: I am an expert experimentalist in embedded systems and complex systems spanning from autonomous drone networks to software defined Massive MIMO. My aim is to gain internship experience as an electrical engineer that will test my communication, leadership, technical, and analytical abilities while also contributing to the success of a company.

EDUCATION

Rice University

Doctor of Philosophy in Electrical and Computer Engineering

Houston, TX

December 2022 – Present

Rice University

Master of Science in Electrical and Computer Engineering - Advisor: Edward Knightly

Houston, TX

August 2019 – December 2022

Tennessee State University

Bachelor of Science in Electrical Engineering; Concentration in Computer Engineering

Nashville, TN

August 2013 – May 2019

Harvard Business School

Summer Venture in Management Program

Cambridge, MA

June 2018

RESEARCH EXPERIENCE

ASTRO & RENEW Research Project

August 2019 - December 2022

Masters Thesis: Drone to Massive MIMO Networks

Houston, TX

- Integrated ASTRO (drone) and RENEW (Massive MIMO) platforms to create a wireless network test bed.
- Developed autonomous drone missions for wireless experiments.
- Evaluated AoA estimation from hovering drones analyzed the resources needed for an accurate and precise estimation.

Air Force Research Laboratory Design Challenge

August 2018 - May 2019

Undergrad Researcher

Nashville, TN

- Implemented a SLAM method for an autonomous indoor search and rescue robot which localized the environment for mapping.

Department of Homeland Security - Scientific Leadership Award

January 2015 - May 2019

Undergrad Researcher

Nashville, TN

- Utilized linear models: least square regression, decision trees, error estimation and regression models to predict the number of cars passing the boarder per hour.
- Applied network theory to analyze the connections between criminals' phone conversations in order to pinpoint the organizations' leaders.

EXPERIENCE

Intel Corporation

July 2019 - August 2019

Software Developer

Santa Clara, CA

- Developed a test validation platform for Docea business recovery packages installing Windows and Linux OS with remote network connectivity for the servers.
- Created a wiki page for SimHub that discusses its architecture in detail, breaking down the platform's Docker and AWS components.

Texas Instruments

May 2018 - August 2018

Semiconductors Test Engineer

Dallas, TX

- Developed a barcode system to track wafer carriers wash cycles to insure metrics are met with cleanness of the FAB.
- Conducted test to support the back-grind wash tank process, validated using chemical samples and historical reports.
- Lead the machine system analysis test for the prober/testers tool for five classes of probers, verifying accuracy of specs.

Lockheed Martin - Space Systems

May 2017 - August 2017

System/Mission Operations Engineer

Denver, CO

- Lead spacecraft anomaly investigation. Worked with subject experts and international customers using root cause analysis techniques to identify on-orbit spacecraft anomaly root cause.
- Created spacecraft wiki pages highlighting valuable build records improving responses time and efficiency of root cause anomaly investigations.

Eaton Corporation

May 2016 - August 2016

Industrial Engineer

Newbern, TN

- Created detail-oriented CAD drawings for the industrial operations team and assisted with LEAN process improvements to reduce kitting costs for the rubber manufacturing division.
- Improved inventory accuracy for the tire cord product line by reconciling engineering product specifications with bill of materials.
- Developed estop and interlock check list for the entire facility, resulting in improving MESH operator efficiency by 13% and safety of the manufacturing process.

DTE Energy Electric Company

May 2015 - August 2015

Power Engineer

Detroit, MI

- Learned the operation of electrical distribution from services centers while ensuring safety standards were met.
- Spearheaded the successfully development of ideas to streamline the workflow processes that will increase efficiency throughout our department.
- Worked towards efficiency with distribution of power to customers, learning technical skills of prevention.

VOLUNTEERING & ACTIVITIES

Research Experiences for Undergraduates (REU)

May – August 2020, 2021, 2022

Research Mentor

Houston, TX

- Research mentor for seven summer interns developed research projects using the ASTRO and RENEW platforms at Rice University.

Life as a Technology Trailblazer and FinTech Startup Founder

February 2022

Lead Organizer

Houston, TX

- Organized a Black History Month seminar to bring Sandra K. Johnson the first African-American woman to earn a Ph.D. in computer engineering to Rice University.

Rice University 48hr Accelerator

January 2020

Chief Technology Officer

Houston, TX

- Won first place in Rice University 48hr Accelerator business completion developed a business model, prototype, and full pitch deck for ApplyForMe.com.

TSU Minority Research and Education Project Aerospace Academy

January 2018 - May 2018

Course Director

Nashville, TN

- Developed and enhanced K-8th hands-on classroom curricula geared towards developing students' interest in aerospace technologies.

SKILLS & SOFTWARE PROFICIENCIES

Languages & certifications: Python, MATLAB, VHDL, LaTeX, AutoCAD, Lean Six Sigma White Belt Certified

CONFERENCES & PROGRAMS & LEADERSHIP

IEEE ComSoc Student Leadership Conference 2022, ACM MobiCom 2021, Rice's Doerr Institute for Leaders 2019-2020, Black in AI Conference 2019, Clemson STEM ALL IN, Georgia Tech Focus Program, Neural Information Processing Systems (NIPS) Conference 2019, Tennessee Consortium for International Studies Program - Turkey, Opportunity Hub HBCU@SXSW, Thurgood Marshall College Fund (TMCf) Leadership Institute 2017 & 2018, National Society of Black Engineers (NSBE) - senator, Tennessee State University Michigan Club - Founder, Advancing Minorities' Interest in Engineering "Design Challenge", INROADS Candidate 2014

AWARDS & HONORS

GEM Fellowship 2019, Most Outstanding Student Leader Award TSU College of Engineering 2019, IEEE Eta Kappa Nu Electrical Engineering Honor Society, CI2-TSU Study Aboard First Place Oral Presentation - Colombia/Nashville 2017 & Trinidad and Tobago 2019, Tennessee State University Honors Program, TMCf - John Deere Scholar Recipient, DHS-Scientific Leadership Award Program 2014-2019