Joey Paul E. Haynes

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Education

University of Texas at Austin, Austin, TX — August 2024 - Present
Master of Science (M.S.) in Computer Science — Graduation: May 2026
Coursework: Planning, Search, and Reasoning Under Uncertainty
Cumulative GPA: 4.00/4.00

Southern New Hampshire University, Manchester, NH — January 2021 - June 2024
Bachelor of Science (B.S.) with Honors — Graduation: June 2024
Major in Computer Science, Minor in Applied Mathematics
Cumulative GPA: 4.00/4.00

Experience

Systems Realization Laboratory at OU, Norman, OK — August 2023 - Present
Research Intern | University of Oklahoma

- Collaborated in a team of 5+ researchers as lead author for the ALAN project, investigating the impact of artificial lights at night (ALAN) on bird strike occurrences
- Conducted exploratory data analysis (EDA) using GIS tools, integrating data including the FAA wildlife strike database, BirdCast migration forecasts, and light pollution rasters
- Developed a spatiotemporal predictive model using decision tree regression with GIS data, achieving an R-squared value of 0.78
- Applied k-fold cross-validation and hyperparameter tuning to optimize model performance, achieving an average absolute error of 0.95 strikes
- Winner of the NSF/ASME student design essay contest for an essay on adaptive manufacturing systems using predictive modeling and cyber-physical-social systems (CPSS)
- Authored 2 first-author publications (IDETC, JCISE) and presented 4 technical presentations

Walmart, Yukon, OK — June 2020 - Present
Sales Associate

- Balanced a customer-facing role throughout undergraduate studies, developing strong time management and leadership skills
- Trained and mentored over 20 employees, enhancing team efficiency and communication
- Managed merchandise presentation and facility maintenance, contributing to a 5.5% YoY sales increase in a $100M/year facility

Projects

Portfolio Website — jpthefish.com — December 2022 - Present

- Deployed a full-stack web application with daily traffic using React.js, Firebase, and SQL
- Created a chatroom with sign-in authentication, back-end security logic, and word filtering
- Designed and implemented a responsive UX design with careful attention to visual accessibility

Grazioso Salvare Analytics Dashboard with Dr. Sherri Maciosek — February 2023

- Developed a full-stack analytics dashboard using Python, MongoDB, and Dash framework
- Implemented interactive data visualization components, including tables, charts, and geolocation maps, enabling stakeholders to filter and analyze animal shelter data by relevant criteria

Technical Skills

Languages: Python, SQL, R, Java, C/C++, MATLAB, JavaScript
Data technology: PostgreSQL, MySQL, MongoDB, Firebase/Firestore
Tools and frameworks: Git, AWS, Docker, OpenGL, React, Tableau

Languages and Other Skills

Intermediate Spanish (B1) and French (B2) Language Fluency
Classical and Jazz Piano

Selected Publications

J. P. Haynes, M. J. Bhalerao, W. T. Honeycutt, J. K. Allen, and F. Mistree. *Predictive Modeling for Public Policy Design: The Impact of Artificial Lights at Night (ALAN) on Bird Strikes.* ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, DETC2024-143780, Washington, D.C., August 2024