

Duran Pasha

duranjpasha@gmail.com | <https://www.linkedin.com/in/duran-jon-p/> | 571-565-1004

EDUCATION

Rice University

Houston, TX

B.S. in Computer Science and B.S. in Electrical and Computer Engineering

May 2028

Relevant Coursework: Computational Thinking, Practical Machine Learning, Computer Architecture, Computer Systems, Intro to Programming Design, Intro to Programming Languages, Concurrent Program Design, Tools and Models - Data Science

EXPERIENCE

EXP Lab at Rice

June 2026 – Present

Software Engineering Intern

Houston, TX

- Led development of a **C# SDK** for a network fan control system within a larger XR environment including haptic floors and co-localization systems, enabling developers to integrate realistic, physical effects into their Unity experiences.
- Constructed a client-host architecture that transmits fan control commands from **ten ESP32** fan controllers to dedicated host hardware through remote **procedure calls**, **shared event bridges**, and **UDP networking**, additionally abstracting away hardware-level information through a high-level API.
- Engineered a compact **3-byte control protocol** to independently manage fan speed, pitch, and yaw across **10 ESP32 nodes**, translating developer-facing percentage and angle inputs into **8-bit hardware commands**.

Rice DataSci

August 2025 – January 2026

Data Science Researcher

Houston, TX

- Collaborated with a 5-person research team to develop multiple end-to-end **Python machine learning pipelines** for detecting hyperthyroidism and hypothyroidism using a database of over **10,000** patient health marker entries.
- Preprocessed and validated patient datasets using **pandas**, handling missing and invalid values and performing feature selection to remove attributes that negatively impacted model performance.
- Trained and evaluated **Random Forest, KNN, SVC, and Gradient Boosting** classifiers with **scikit-learn**, achieving peak accuracy and precision of **97.24%** and **91.05%**, respectively, using feature engineering and model evaluation.

Rice University George R. Brown School of Engineering

August 2026 - January 2027

Teaching Assistant - COMP 215

Houston, TX

LEADERSHIP & INVOLVEMENT

AWS Cloud Club at Rice

December 2025 – Present

Club Manager

Houston, TX

- Led AWS workshops alongside senior AWS Solutions Architects to spread awareness of cloud computing to students as the only cloud-computing club on campus; thus far, successfully introduced well over **60%** of the CS community at Rice to various AWS services (**VPC, SGs, IAM, EC2, SSM, ALB, S3, ASG, etc.**)
- Currently working on the development of new workshops and panel talks with AWS solutions architects.

Machine Learning @ Rice

April 2026 - Present

Event Manager

Houston, TX

- Coordinate body meetings, workshops, and project meetings as part of the **largest computer science club** at Rice
- Currently developing academic-year long projects to help club members develop their machine learning skills.

FTC Robotics

August 2020 – May 2024

Team Captain & Lead Java Programmer

Katy, TX

- Engineered new movement systems utilizing **odometry-based pathing** algorithms; contributed to over a **115%** increase in team's average score per round since the start of the season.
- Mentored **15+** students in programming and computer-aided design skills across **three** separate teams, **significantly** increasing the size and strength of their engineering and programming sub-teams.

NASA Aerospace Scholars Program

October 2022 – February 2023

Aerospace Scholar

Katy, TX

PROJECTS

IKEAlternative | *Python, FastAPI, TypeScript, React, SQLite, WebSockets*

- Built a local-first web platform for discovering and controlling DIRIGERA-connected smart lights, supporting device and room controls, brightness adjustment, reusable scenes, and synchronized device state.
- Architected a **protocol-independent provider** layer with simulated devices and automated tests; instrumented commands to measure latency, connectivity, and failures.

TECHNICAL SKILLS

Skills: Python, Java, C, C#, pandas, scikit-learn, NumPy, PyTorch, Git, AWS Services (EC2, IAM, DynamoDB, Kubernetes)