

# John Henry Mejia

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## EDUCATION

### Texas Christian University

B.S. in Computer Science

Minors in Mathematics & General Business

August 2020 - May 2024

Trustee Scholar and Chancellor's Scholar

UPE Computing Honor Society

## EXPERIENCE

### Lockheed Martin Co - Systems Engineer

May 2024 - Present

- Supported F-22 Integrated Maintenance Information System program on the Systems Engineering Team.
- Collaborated with the hardware team to create high-level and component-level diagrams in Cameo, develop system requirements, and support process improvements using Agile. Developed processes for installing, configuring, and managing RHEL/VMware systems.
- Modeled IMIS releases using Cameo by refactoring and creating diagrams from scratch (activity, sequence, parametric, use case, and block definition) to ensure accurate system representation.
- Led the requirements lifecycle as Requirements Manager, presenting changes to and collaborating with the Requirements Review Board, and driving the development, maintenance, and retirement of requirements.
- Administered, connected, and standardized DOORS and Cameo databases across unclassified and classified systems, maintaining data integrity. Used DXL/SQL/Java/Python to streamline document exports by 94% and enable document generation from the Cameo model.

### Atlassian - Site Reliability Engineer Intern

May 2023 - Aug 2023

- Migrated runbook backup system to AWS SQS + Lambdas, improving scalability + reliability and decreasing backup time by ~90.2%, allowing the service to be run 4x as often and decreasing cost by 71.4% week-over-week.
- Backup runbook system incrementally backs up 14,700 runbooks daily, supporting 188 separate spaces (teams).
- Streamlined database health monitoring through automated generation of PDF reports using AWS S3, Lambdas, and Step Functions; reports sent to Confluence and unhealthy signs are alerted via Slack.

### Ultra Electronics - Software Engineer Intern

May 2022 - Aug 2022

- Developed plane clustering algorithms and flight pattern identifiers to enhance combat ID recognition in the RAIN (Rapid Application of Information) system. (sklearn DBSCAN, OpenCV feature extraction)
- Maintained Jenkins pipelines to streamline Grype scans of Linux container images, automated response emails.
- Created Java applet to transform between different coordinate systems from different flight data sources.

## PROJECTS AND RESEARCH

### Team Leader, AI-Enhanced Educational Portal (Senior Design) 2023-2024 · <https://classifai.tcu.edu/>

- Managed a team to automate transcription and question analysis of classroom audio for data-driven feedback.
- Created automated transcription/diarization system through OpenAI Whisper and Pyannote, and categorization of questions according to Costa's levels of thinking via Meta's LLaMA-3.2.
- Improved base accuracy of LLaMA question categorization by 8.7% (71% → 77.1%) through ORPO fine-tuning. All analysis done locally for cost-effectiveness and privacy.

## COMPUTER SKILLS

*Languages & Databases:* Python, UML, SysML 2, C#, C, C++, Java, DXL (DOORS), R, SQL, Bash

*Frameworks:* Flask, TensorFlow (Keras), Apache Velocity, Spring Boot, Jenkins, Kubernetes, Docker, VMWare

*Libraries & Other:* NumPy/Pandas/matplotlib, sklearn, git, AWS SQS + Lambdas, Linux (RHEL, Fedora)

## OTHER

TCU Rowing Team

Languages

Security Clearance - Secret

2020 - Present: Coach | Former President | National Record Holder

English (Fluent), Spanish (Fluent)