Jack Thomson

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Experience

Senior Software Engineer, Wisk Aero – Remote   2024 – Present
- Wrote work package, interfaced with front end developers and performed integration for front end flight instructor UI to command various aircraft faults across a complex simulation environment using Python and Typescript, enabling Human Factors team to evaluate Pilot responses to autonomous aircraft
- Integrated Airspace Integration Service Provider (AISP) via a RESTful API to provide and receive aircraft state, weather alerts, and traffic alerts enabling development of aircraft operations in a complex airspace
- Achieved cross-platform compatibility for simulation development by implementing a VS Code Dev Environment, removing the requirement for a dedicated Linux setup and enabling more developers to write and test models
- Created Google Cloud Engine Configuration to concurrently run Docker containers of different simulation models in the cloud for any user to start and stop configurable simulations

Software Engineer, Wisk Aero – Remote   2021 – 2024
- Led Software Test team to create a plan for adding a new system architecture to the aircraft including working with systems engineering team to write requirements, test acceptance criteria, and delegating work
- Designed and wrote System Integration Level tests to ensure safe flight conditions on demo aircraft remained synchronized including abnormal conditions such as GPS failover, pitot failure, and INS disagreement
- Wrote harness for Siemens Simcenter Prescan Radar model and integrated it with support from Guidance and Navigation Control engineers to enable testing of Detection and Avoidance Algorithms of other aircraft in flight
- Designed and implemented a Power on Self Test for a new configuration of the demonstration aircraft that ensured both Flight Control Computers had all communication paths fully exercised to enable Flight Demo
- Implemented VectorCAST QA software coverage tool on multiple CPU Architectures to satisfy DO-178C objectives for code coverage and creating artifacts that proved tests were actually exercising code

Flight Software Verification Engineer, Wisk Aero – Atlanta   2019 – 2021
- Wrote 200+ Low Level Tests in VectorCAST/C++ to prove out-data flow in Guidance and Navigation Control software resulting in a safety-critical software rewrite of existing GNC code
- Evaluated options for Data and Control Coupling (DCCC) tools for C language software and presented findings to team, ultimately creating an internal company process to satisfy DO-178C DCCC objectives

Projects

wrektranet3, Radio Operator Dashboard for Live Cataloging of Songs   2023 – 2024
- Wrote backend logic in Typescript for creating and scheduling radio shows allowing for current usage at a college radio station to with over 100+ users weekly
- Created user upload form in Typescript and Python so that users can prerecord a show, schedule it from home, and allow for remote usage of the station

Skills

Certifications: Associate Cloud Engineer (Google Cloud Platform)
Programming: Typescript, Python, C++, Bash
Software/Tools: VectorCAST, Icecast, pytest, Google Cloud Platform, Docker, Conan
Hobbies: Learning French, playing music

Education

Georgia Institute of Technology – BS in Electrical Engineering   2018