JACOB BASS

Contact

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Email
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Portfolio
jsbass.com
github.com/jsbass

Skills

- Microsoft Office
- Solidworks
- MATLAB
- Visual Studio
- Cameo
- Agile/Scrum
- C/C++
- C#/JAVA
- SQL
- HTML/CSS
- Git

Education

Aug 2013 – Aug 2016
Bachelor of Science: Aerospace Engineering
University of Oklahoma
3.0 GPA

Aug 2010 – May 2011
Oklahoma School of Science & Mathematics
Regional Center

Profile

After graduating with an engineering degree, I've spent the two years working as a software developer. I want to pivot back to aerospace and engineering while utilizing the experience I have gained as a software developer. I have multiple examples of self-motivation and try to my team better than when I arrived.

Work

Jun 2020 - Present
The Boeing Company
Systems Engineer

Model-Based Systems Engineer working on the re-engine program for the B-52. Used software experience, to reinforce the Agile/Scrum process and to aid in model development and analysis with Cameo.

Sep 2016 - Jun 2020
OU IT – IT Studio
IT Analyst II

Full stack application development. Gained experience working as part of a team in an Agile development process. Involved in tasks including development, QA, deployment, reliability, and support.

Experience

Nov 2020 - Mar 2021
MIT xPro Systems Engineering Course
Architecture and Systems Engineering: Models and Methods to Manage Complex Systems

Continuing education in systems engineering, MBSE, and more generally MBE. Learned about model usage in a system engineering concept and gained insight into non-technical system management perspectives.

Summer 2019
Labradorium
Co-Owner and Primary Developer

Developed functioning product but, business has been put on hold due to time constraints. This involves full-stack web development, cloud hosting of infrastructure to minimize cost, and experience developing for foreign ecosystems with the Excel Add-In development.

Spring 2016
OU Senior Capstone
Chief Engineer

Capstone to design and build scale model Northrop-Grumman reusable spaceplane. The goals were for the model to be capable of rocket assent and autonomous airplane landing

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Awards

AP Scholar with Distinction
College Board

Science & Engineering Fair US Army Award
US Army Research Lab

Oklahoma Regents Scholar
Oklahoma State Regents for Higher Education

OUIT Employee of the Month
University of Oklahoma

Physics Journal Club Presenter
University of Tulsa

Experience Cont'd

Spring 2016 — **Nonlinear Dynamical Systems & Control**
AME 4980

This course covered an introduction to nonlinear stability methods and basic control techniques such as state linearization and adaptive control. At the end, my team and I were given a project demonstrating backstepping with a quadrotor.

Fall 2015 — **Dashboard Development for OU IT**
Self-Started Project for OU IT – Learning Spaces

Design and implementation of web-based data source compilation and display. Self-proposed project approved by team lead for a modern, responsive interface with dynamic information loading. Gained experience creating system documentation and interdisciplinary experience with team members from various fields of study.

Projects

Personal projects with which I've been involved.

Spring 2017 — **OU Map**
Host removed. Rehost imminent.
Completed

Map of OU buildings and parking lots with quick click detection handled on the backend using a spatial partitioning tree. Contains features for editing the building details including the clickable building polygon on the map. I need to rebuild the database and subsequent connections in order to rehost this application.

Fall 2017 — **Labradorium (Private Source)**
https://www.labradorium.com
Incomplete

Book hosting and auto-grading assignment tools to facilitate learning in the classroom and ease the overhead of teaching large classes. I am one of two co-owners of the company. The source code is private as this is part of my company's code.

Fall 2015 — **2D Airfoil Analyzer**
http://jsbass.com/stuff/JavaScript/Aero/JS_Foil.html
Mostly Completed

Client-side app that uses a Vortex-Panel method to calculate forces on a 2D airfoil. Only graphing library and functions to convert NACA airfoil numbers to cartesian equations. Mostly done.