# Contact

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# Skills

# Education

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| --- | --- |
| Sep 2020  -- Mar 2021 | Architecture and Systems Engineering: Models and Methods to Manage Complex Systems MIT xPro Certificate Program |
| Aug 2013  – Aug 2016 | Bachelor of Science: Aerospace Engineering University of Oklahoma  3.0 GPA |

# Profile

After graduating with an engineering degree, I spent 5 years in the software development world. There I learned a lot about managing customer requirements and desires as well as taking product from conception to completion. Afterwards I transitioned to a systems engineering role. I have found that a software background facilitates abstraction skills as well as enforcing requirements/functionality driven design work which is standard in the systems engineering community. In my systems engineering role, I have focused primarily on technical rigor in our systems model. Additionally, I have emphasized engineering processes as well as functionality and requirements led design work to ensure first time quality and depth of engineering design analysis.

# Work

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| --- | --- |
| 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. Contributed to the Cameo scripting community by being a point of contact for technical scripting questions. Converted complex/highly relational Excel data into more traditional relational databases for programs as a means of analyzing and maintaining complex data more reliably. |
| 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 **planning, development**, **QA**, **deployment**, **reliability**, and **support**. |

# Experience

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| --- | --- |
| Summer 2019 | Labradorium Co-Owner and Primary Developer  In charge of development, systems administration, and UI/UX. Actively involved in product planning as well. Took the product from conception, through requirements and functionality, to a product entering live user testing in an actual classroom environment. |
| 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 |

# Awards

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| --- | --- |
| Ribbon | OUIT Employee of the Month University of Oklahoma |
| Ribbon | Science & Engineering Fair US Army Award US Army Research Lab |
| Ribbon | Oklahoma Regents Scholar Oklahoma State Regents for Higher Education |
| Ribbon | AP Scholar with Distinction College Board |
| Ribbon | Physics Journal Club Presenter University of Tulsa |

# Experience Cont’d

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| --- | --- |
| 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.

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| --- | --- |
| Spring 2017 | OU Map <https://github.com/jsbass/OUProjects> (code only. Rehost eventually).  **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 as well as the primary developer and systems administrator. |
| 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. |