

Thomas J. Stepp

630-842-1284
tom.j.stepp@gmail.com

Experience

Software Engineer, Boeing AvionX	2017 – Present
<ul style="list-style-type: none">Architect of continuous integration suite for flight software team of 150 developersDevelop website to provide accessible software metrics to enable management decisionsReduced Matlab code generation times from 10 to 1.5 hours with parallelization and cachingPlan and lead team through software upgrades of Matlab, Atlassian products, and Git	
Network Engineering Intern, Facebook	2016
<ul style="list-style-type: none">Created scripts for automation of network switch testing with Tcl and Ixia hardware APIDeveloped driver for IC chip with C++ to improve Wedge100 switch function and reliability	

Conference Presentations & Awards

Boeing Technical Excellence Conference , Model-Based DevOps presentation	2021
Boeing MATLAB Community of Practice , Model-Based Continuous Integration presentation	2020
Boeing Technical Excellence Conference , Two confidential technical presentations	2020
Boeing Intellectual Property Management , Meritorious Invention Award	2020
Boeing Simulation Conference , S-Function Integration with Simulink presentation	2018

Education

M.S. in Computer Science, University of Southern California	2021
<ul style="list-style-type: none">Courses: Artificial Intelligence, Algorithms, Web Tech, Search Engines, Operating Systems	
B.S. in Electrical Engineering, Purdue University	2017
<ul style="list-style-type: none">Courses: Software Engineering Tools, Algorithms & Data Structures, OO ProgrammingStudy abroad at Universidad Carlos III de Madrid in Spring 2016	

Projects

Solr Search Engine	2021
<ul style="list-style-type: none">Created inverted index of news web pages, implemented auto-complete and spelling correction	
Weenix Kernel	2021
<ul style="list-style-type: none">Implemented processes and threads, virtual filesystem, and virtual memory	
Machine Learning: Handwritten Digit Classification	2020
<ul style="list-style-type: none">Programmed neural network from scratch in Python to classify digits from MNIST database	
Go-Playing AI Agent	2020
<ul style="list-style-type: none">Programmed Minimax algorithm in Python to beat other AI agents at games of 5x5 Go in real-time	
3-D Maze AI Agent	2020
<ul style="list-style-type: none">Programmed A* algorithm in Python to solve large-scale 3-D mazes efficiently	
COCOMO II Web App, USC Center for Systems and Software	2020
<ul style="list-style-type: none">Developed GitLab pipeline to run Jest test suite, collect code coverage, and deploy to productionUpgraded pipeline to deploy app changes to staging environments and evaluate web performance	
React News Website	2020
<ul style="list-style-type: none">React front-end allows users to browse, share, and bookmark news articles from their browserNode.js + Express back-end provides news articles from the NY Times and The Guardian APIs	
Flask News Website	2020
<ul style="list-style-type: none">Plain JavaScript front-end provides user search, word-cloud, and slideshow of top articlesPython + Flask back-end provides news articles from Fox News & CNN via Google News API	
UNIX Socket Programming	2019
<ul style="list-style-type: none">Five C/C++ programs in distributed system for storing, querying, & calculating network delays	
Computer Security Python Projects	2017
<ul style="list-style-type: none">Used Python to write encryption algorithms such as AES and RSA	