

# Tom Stepp

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## Experience

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<b>Software Engineer, Google</b>	2021 – Present
<ul style="list-style-type: none"><li>Improving backend efficiency for GCP Dataflow with C++ contributions</li><li>Implementing asymmetric autoscaling features to save customers service cost</li></ul>	
<b>Software Engineer, Boeing AvionX</b>	2017 – 2021
<ul style="list-style-type: none"><li>Architect of continuous integration suite for flight software team of 150 developers</li><li>Reduced Matlab code generation times from 10 to 1.5 hours with parallelization and caching</li></ul>	
<b>Software Engineer, Facebook</b>	2016
<ul style="list-style-type: none"><li>Created scripts for automation of network switch testing with Tcl and Ixia hardware API</li><li>Developed driver for IC chip with C++ to improve Wedge100 switch function and reliability</li></ul>	
<b>Software Engineer, GE Aviation</b>	2015
<ul style="list-style-type: none"><li>Developed test validation software for Leap and Passport aircraft engines</li></ul>	

## Education

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M.S. in Computer Science, <b>University of Southern California</b>	2021
B.S. in Electrical Engineering, <b>Purdue University</b>	2017
Study Abroad, <b>Universidad Carlos III de Madrid</b>	2016

## Leadership

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New Grad Mentor, Google	2022 – Present
STEM Outreach Volunteer, Boeing	2018-2021
ECE Student Society Board Member, Purdue	2014-2017
Eagle Scout, Boy Scouts of America	2013
Team Captain, Roadrunners Soccer Club	2011-2013

## Awards & Presentations

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Google Gold Perfy Award, Asymmetric Autoscaling for Dataflow Streaming	2023
Boeing Technical Journal, Analysis for Large-scale Software Systems	2021
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

## Projects

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<b>Solr Search Engine</b>	2021
<ul style="list-style-type: none"><li>Created inverted index of news web pages, implemented auto-complete and spelling correction</li></ul>	
<b>Weenix Kernel</b>	2021
<ul style="list-style-type: none"><li>Implemented processes and threads, virtual filesystem, and virtual memory</li></ul>	
<b>Machine Learning: Handwritten Digit Classification</b>	2020
<ul style="list-style-type: none"><li>Programmed neural network from scratch in Python to classify digits from MNIST database</li></ul>	
<b>Go-Playing AI Agent</b>	2020
<ul style="list-style-type: none"><li>Programmed Minimax algorithm in Python to beat other AI agents at games of 5x5 Go in real-time</li></ul>	
<b>React News Website</b>	2020
<ul style="list-style-type: none"><li>React front-end allows users to browse, share, and bookmark news articles from their browser</li><li>Node.js + Express back-end provides news articles from the NY Times and The Guardian APIs</li></ul>	
<b>UNIX Socket Programming</b>	2019
<ul style="list-style-type: none"><li>Five C/C++ programs in distributed system for storing, querying, &amp; calculating network delays</li></ul>	