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ill-ya star-y-kov | He/Him |  













$\int_{2017} expertise$  (Data Science, Cloud, System Design)  $dt = 7^+$  YoE  
Software Engineer applying AI & ML to build the future of  
digital communication. *Pursuing opportunities to put a dent  
in the universe.*

## VOCATION














1/2025	<b>Software Engineer</b>  <b>Google</b> Project Starline	Research,  Labs San Francisco Bay Area
	<ul style="list-style-type: none"><li>Owned internal camera hardware-in-the-loop test infrastructure/suite: enabled new tests, new hardware, executor platforms; fixed &gt; 10 issues, triaged failures; achieved first suite <b>pass in 105 days</b> <math>\in</math> 1 month of start date</li><li>Re-architected camera software updater for better multi-peripheral support, adding support for a new peripheral</li><li>Implemented various quality-of-life improvements, such as saving 700 MB from, strengthening presubmit checks</li><li>Achieved "Sanjay number" of 1 from an LGTM (code change approval) from <b>Sanjay Ghemawat</b></li></ul>    C++, Bash	
9/2023	<b>Software Engineer</b>	Research,  Labs
1/2025	<b>Google</b> Project Starline	San Francisco Bay Area
	 <ul style="list-style-type: none"><li>Designed the end-to-end factory software architecture, <b>adopted by Google and HP</b><ul style="list-style-type: none"><li>Aligned 25 cross-functional engineering managers, ICs, security council, and program management</li></ul></li><li>Brought up in-house upload server infrastructure, facilitating factory data access for Google and HP</li><li>Implemented the standard factory interface for Starline's OS, responsible for interfacing, testing, and calibrating<ul style="list-style-type: none"><li>Integrated six subsystems into said interface, including one audio functional test</li><li>Formulated Diagnostics framework, responsible for system health checking as a factory final-assembly test</li></ul></li><li>Contributed to the release process, automating (&gt; 25) factory preflight tests into a single Bash script</li></ul>    C++, Python, Bash	
9/2023	<b>Software Engineer</b>	Platforms & Devices Product Area (PDPA)
12/2019	<b>Google</b> Central Test Engineering	San Francisco Bay Area
	 <ul style="list-style-type: none"><li>Factory audio software DRI for <b>Nest Cam, Pixel Tablet, Pixel Buds Pro, and Pixel Buds Pro 2</b><ul style="list-style-type: none"><li><b>Saved \$120k in program capex</b> by optimizing Nest Cam (52%) and Pixel Tablet (23%) test time</li><li>Nest Cam's test script was <b>fastest within Google audio</b> (by 36%) during entire tenure</li><li>Nest Cam was Nest's first fully-remote program, from PROTO to MP</li></ul></li><li>Architected an ML system to make Nest and Pixel factory data more insightful and actionable<ul style="list-style-type: none"><li>Pioneered 6 novel ML use-cases, across 7 programs, with accuracy up to 98.5%</li><li>Example pipelines include clustering common failures from previous products, classifying said failures in future products, and using regression to produce new metrics or replace old ones</li></ul></li><li>Hosted intern who built a data fusion of {"3D" Lidar + "2D" photos}, implementing feature matching via ML SuperGlue Network and OpenCV ORB, producing color depth-maps and interactive 3D reconstructions</li><li>Founded or co-founded efforts to scale software within entire organization: documentation overhaul (internal 350 new users/month, 750 new sessions/month), boost software testing (<b>hundreds of new test cases</b>), test station adoption org-common or team-common libraries (<b>code reduction up to 70%</b>)</li><li>Implemented initial factory data downloader (adopted by org, external teams), common audio test framework (entire team), and lead forums for knowledge sharing (team participation)</li><li>Contributed 1.3 million lines of code, config, and artifacts across across 16 language types</li></ul>  Python matplotlib, numpy, pandas, SciPy   git	

Garmin, 2y 6m 11d






12/2019	<b>Software Engineer</b>	Aviation
7/2018	<b>Garmin</b> Safety & Datalink	Greater Kansas City Area
▲	<ul style="list-style-type: none"> <li>◦ <b>Lead system testing effort</b> to meet DO-178B compliance on <b>GDL-60</b> <ul style="list-style-type: none"> <li>◦ Designed new test architecture, supported test infrastructure, and wrote test plans</li> </ul> </li> <li>◦ Implemented embedded software to synchronize configuration between two operating systems</li> <li>◦ Lead a high-school focused engineering project to build and race a hovercraft, presented at Kansas State's ACM, guided children with Bring Your Child To Work Day projects, hosted tours</li> </ul>	
	 git	
7/2018	<b>Software Engineering Intern</b>	Aviation
8/2017	<b>Garmin</b> Interfaces/Data Routing	Rolla, MO
▲	<ul style="list-style-type: none"> <li>◦ Implemented validation system for a highly-utilized aviation tool, resulting in <b>25% code reduction</b> in affected classes</li> <li>◦ Implemented many (&gt; 10) quality-of-life improvements for aforementioned tool</li> </ul>	
8/2017	<b>Software Engineering Intern</b>	Automotive OEM
5/2017	<b>Garmin</b>	Greater Los Angeles Area
▲	<ul style="list-style-type: none"> <li>◦ Enhanced reliability (<b>80% to 100% success rate</b>) and execution time (<b>5× speed up</b>) of automation suite by developing on-device APIs and consuming new, optimized APIs in test suite</li> </ul>	
	 Visual Studio	
12/2017	<b>Team Lead &amp; DRI</b>	Aerospace
4/2016	<b>Missouri S&amp;T Satellite Team</b> Stereoscopic Imaging	Rolla, MO
	<ul style="list-style-type: none"> <li>◦ <b>Lead 6 person team</b> of undergraduate and graduate students to deliver nanosatellite payload: mid-flight, stereoscopic capture (via MR SAT) and 3D reconstruction of a paired satellite (MRS SAT)</li> <li>◦ Wrote synchronous flight capture code across 2× cameras to run on-device (Raspberry Pi)</li> <li>◦ Collaborated with chief engineer, program manager, and program subsystems to architect flight code</li> <li>◦ Satellite is undergoing testing and reviews, scheduled for launch on Summer 2024</li> </ul>	
5/2017	<b>Undergraduate Teaching Assistant</b>	Computer Science
8/2016	<b>Missouri University of Science and Technology</b>	Rolla, MO
	<ul style="list-style-type: none"> <li>◦ Taught programming concepts to freshman/sophomore-level students across 3× classes: Introduction To Programming (Class+Lab), Data Structures (Lab)</li> <li>◦ Created assignments, graded assignments, tests for <b>class sizes upto 60 students</b></li> <li>◦ Automated grading with tools to detect plagiarism, styleguide conformance, and course-specific rules</li> </ul>	
12/2014	<b>Assistant</b>	Employment Services
9/2014	<b>Jefferson College</b>	Hillsboro, MO
	<p>Rehired 5/2015–8/2015, 5/2016–8/2016</p> <ul style="list-style-type: none"> <li>◦ Created user manual to serve as a guide for all new employment services assistants</li> <li>◦ Maintained large student-employment databases via college's content management system</li> <li>◦ Designed posters, fliers, and newsletters for campus announcements</li> </ul>	
8/2014	<b>Web Developer</b>	
5/2014	<b>Freelance</b>	De Soto, MO
	<ul style="list-style-type: none"> <li>◦ Supported <b>6</b> projects for various clients: creating websites, mockups, data mining, data entry</li> <li>◦ Specialized in Wordpress and Bootstrap frameworks, crafting sites to meet client's requirements</li> </ul>	

	Software Engineer Project Starline <b>Google</b> .....	9/2023–present
	Software Engineer Central Test Engineering <b>Google</b> .....	12/2019– 9/2023
	Software Engineer Safety & Datalink <b>Garmin</b> .....	8/2017– 6/2018
	Software Engineering Intern Interfaces/Data Routing <b>Garmin</b> .....	8/2017– 6/2018
	Software Engineering Intern Automotive OEM <b>Garmin</b> .....	5/2017– 8/2017
	Bachelor of Science Computer Science <b>Missouri S&amp;T</b> .....	1/2015–12/2018
	Team Lead & DRI <b>Missouri S&amp;T Satellite Team</b> .....	4/2016–12/2017
	Undergraduate Teaching Assistant Computer Science <b>Missouri S&amp;T</b> .....	8/2016– 4/2017
	Computer Lab Assistant <b>Missouri S&amp;T</b> .....	1/2016– 4/2017
	Employment Services Assistant <b>Jefferson College</b> ..	9/2014–12/2014, 5/2015–8/2015, 5/2016– 8/2016
	Web Developer <b>Freelance</b> .....	5/2014– 8/2014
	Computer Lab Assistant <b>Missouri Valley College</b> .....	9/2013– 5/2014

## ATTRIBUTES

tech	<b>Languages</b> Python, C++, C, Bash, SQL, LaTeX <i>Previous</i> Swift, C#, Lua, Perl Assembly, Lisp, Matlab, Vimscrip, Basic, AppleScript, ActionScript <b>ML</b> scikit-learn, TensorFlow, Colab, GCP Vertex AI <b>Tools</b> Docker, Git, i3wm, Make, regex, tmux, Tmuxinator, Vim, Xcode & iOS toolchain, ZSH <b>Markup</b> CSS, HTML, JSON, Markdown, reStructuredText, XML, YaML <b>Python</b> Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv <b>C++17</b> abseil, Boost, catch2, lldb, STL, valgrind	            
stats	8 consumer/enterprise projects, 15 <sup>+</sup> interviews conducted, 1 intern hosted, > 800 CLs submitted, > 300 code reviews, > 100 “tickets” closed, 9 managers reported to	
kudos	8× Google Peer Bonus, 4× Google Spot Bonus, Googler Thank You Campaign receipt, {Garmin new-hire, Google new-hire, Starline} trivia winner, 1 <sup>st</sup> Place MegaMiner AI, Summa Cum Laude honors, 6× Dean's List Award, 18 <sup>th</sup> /229 Missouri S&T ACM SIG Competition ranking	

## EDUCATION

12/2018	<b>Bachelor of Science</b> Computer Science	
1/2015	<b>Missouri University of Science and Technology</b>	Rolla, MO
	<b>GPA 3.83/4.0; Major GPA 3.88/4.0;</b>	Summa Cum Laude
	<b>Advisers</b> Dr. Jennifer Leopold, Dr. A. Ricardo Morales, Dr. Simone Silvestri, Professor Clayton Price	
	<b>Associations</b>	
	◦ <b>ACM</b> Academy of Computing Machinery .....	2/2016–5/2018
	◦ <b>MSAT</b> Missouri S&T Satellite Team .....	12/2017–5/2018
	◦ <b>IEEE</b> Institute of Electrical and Electronics Engineers .....	1/2016–5/2017
	<b>Coursework</b> Artificial Intelligence, Evolutionary Computing, Data Mining, Object-Oriented Numerical Modeling, Analysis of Algorithms, Undergraduate Research, Differential Equations, Calculus, Linear Algebra, Statistics, Modern Physics, Physics, Discrete Mathematics, Web Design, Micro Embedded Design, Chemistry	
	Private Pilot Ground School 3/2019–5/2019	
	<b>Jefferson College</b> 8/2014–12/2014 <i>A+ scholarship</i>	
	<b>Missouri Valley College</b> 8/2013–5/2014 <i>Cross-Country/Track &amp; Field scholarship</i>	
5/2013	High School	diploma
8/2009	<b>De Soto Senior High</b>	De Soto, MO
	<b>Associations</b> Cross-Country (Class 3, 2× All-District individual [2011–2012], 1× All-District team [2012], #5 team state ranking [2012]), Track & Field, Future Business Leaders of America (FBLA)	
5/2009	Elementary, Middle School	diploma
8/2000	<b>Sunrise R-IX School District</b>	De Soto, MO
	<b>Associations</b> Cross-Country, Basketball, Computer Club, Quiz Bowl, Chess Club, Yearbook Design	
	<b>Awards</b> Presidential Fitness Award [x8, 2001–2009], School Speech Contest Winner	