

ILLYA STARIKOV



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San Francisco Bay Area

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






Software Engineer scaling AI to build the future of digital communication. Architected ML systems across 7 product lines achieving 98.5% accuracy. Driven to solve impactful, real-world problems using data, science, and mathematics.

EXPERIENCE














1/2025	Software Engineer Google Beam	<i>Research, Labs</i> <i>San Francisco Bay Area</i>
	<ul style="list-style-type: none">Owned camera hardware-in-the-loop test (HILT) infrastructure, enabling new tests, hardware, and platforms<ul style="list-style-type: none">Eliminated 105-day camera HILT failure streak \in 1 month of start-date, resolved 10^+ blocking issuesRe-architected camera software updater for multi-peripheral support, integrating new hardware configurationsReduced system image by 30% (700 MB), implemented CI/CD presubmit checks, and built developer toolingAchieved code approval from Google Fellow Sanjay Ghemawat ("Sanjay Number of 1") C++, Bash	
1/2025 9/2023	Software Engineer Google Beam	<i>Research, Labs</i> <i>San Francisco Bay Area</i>
	<ul style="list-style-type: none">Designed end-to-end factory software architecture, adopted by Google-HP partnership<ul style="list-style-type: none">Aligned 25 cross-functional stakeholders spanning engineering, security, and program managementBuilt secure data pipeline between Google and HP factories, enabling real-time production monitoring [spot bonus]Unified factory interface through comprehensive testing and calibration framework<ul style="list-style-type: none">Integrated 6 mission-critical subsystems: audio, camera, displays, lighting, OS, USBFormulated system health-checking as a factory final-assembly test via a Diagnostics framework [spot bonus]Automated 25+ manual preflight tests, saving 2+ days of engineer time in 2024 alone C++, Python, Bash	
9/2023 12/2019	Software Engineer Google Central Test Engineering	<i>Platforms & Devices Product Area</i> <i>San Francisco Bay Area</i>
	<ul style="list-style-type: none">Shipped 10 M+ Nest Cam, Pixel Tablet, Pixel Buds Pro/2 devices as factory audio software DRI [2\times peer bonus]<ul style="list-style-type: none">Saved \$120 k in capex via test code optimizations: Nest Cam (52% time reduced), Pixel Tablet (23%)Achieved 36% faster performance than any other Google audio test suite with Nest CamPioneered Nest's first fully-remote hardware program from prototype to mass production during COVID-19Built ML-driven analytics system transforming factory data into actionable insights for 7\times Nest and Pixel products<ul style="list-style-type: none">Deployed 6 ML applications: clustering novel failure patterns to make 10^+ datasets, classification of said patterns with 98.5% accuracy, regression for additional quality metrics within 1/2 dB accuracy [2\times peer bonus]Mentored 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 reconstructionsSpearheaded organization-wide scaling initiatives: documentation overhaul (350 users/month, 750 sessions/month), expanded test coverage (hundreds of new test cases), standardized libraries achieving 70% code reductionCreated foundational tools adopted organization-wide: factory data downloader, unified audio test framework, knowledge-sharing platformsContributed 1.3 M lines of code across 16 languages to production systems Python matplotlib, numpy, pandas, SciPy Git	

Σ Garmin, 2y 6m 11d






12/2019	Software Engineer	Aviation
7/2018	Garmin Safety & Datalink	Kansas City Area
▲	<ul style="list-style-type: none"> ◦ Led system testing achieving DO-178B aviation safety compliance for GDL-60 datalink receiver <ul style="list-style-type: none"> ◦ Designed test architecture, built infrastructure, and authored comprehensive test plans ◦ Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux) ◦ Led STEM outreach: hovercraft engineering project (presented at Kansas State ACM), mentored Bring Your Child To Work Day, conducted facility tours 	
	  Git	
7/2018	Software Engineering Intern	Aviation
8/2017	Garmin Interfaces/Data Routing	Rolla, MO
▲	<ul style="list-style-type: none"> ◦ Built validation system for aviation tool achieving 25% code reduction while enhancing reliability ◦ Delivered 10⁺ quality-of-life enhancements for aforementioned aviation tool 	
8/2017	Software Engineering Intern	Automotive OEM
5/2017	Garmin	Los Angeles
▲	<ul style="list-style-type: none"> ◦ Improved automation suite reliability from 80% to 100% and achieved 5^x speed improvement through API optimization 	
	 Visual Studio	
12/2017	Team Lead, DRI	Aerospace
4/2016	Missouri S&T Satellite Team Stereoscopic Imaging	Rolla, MO
	<ul style="list-style-type: none"> ◦ Led 6-person interdisciplinary team developing nanosatellite payload with real-time stereoscopic imaging and 3D reconstruction for satellite monitoring ◦ Architected synchronized dual-camera system on Raspberry Pi for precise, space-based stereoscopic imaging ◦ Collaborated with chief engineer to design flight software meeting aerospace standards ◦ Achieved critical design review approval; satellite launch scheduled for 2026 	
5/2017	Teaching Assistant	Computer Science
8/2016	Missouri University of Science and Technology	Rolla, MO
	<ul style="list-style-type: none"> ◦ Taught programming fundamentals to hundreds of students across 4x classes and labs instances of Introduction to Programming and Data Structures ◦ Successfully detected plagiarism, style infractions, and bugs via self-developed automation using Stanford's MOSS 	
12/2014	Assistant	Employment Services
9/2014	Jefferson College	Hillsboro, MO
	<p>Rehired 5/2015–8/2015, 5/2016–8/2016</p> <ul style="list-style-type: none"> ◦ Created user manual adopted as standard training resource for all new assistants ◦ Managed campus-wide student employment database and designed marketing materials 	
8/2014	Web Developer	
5/2014	Freelance	De Soto, MO
	<ul style="list-style-type: none"> ◦ Delivered 6 client projects including websites, UI/UX design, and data analytics ◦ Specialized in WordPress and Bootstrap for responsive web development 	
5/2014	Assistant	Computer Lab
9/2013	Missouri Valley College	Marshall, MO
	<ul style="list-style-type: none"> ◦ Provided technical support to students with Visual Basic, C, and C++ programming assignments and projects ◦ Coached students in a diverse array of computer applications (Microsoft Suite, Visual Studio, etc.) and programming concepts, debugging techniques, and best practices for software development ◦ Maintained and updated software installations across lab workstations, ensuring compatibility with coursework 	
11/2012	Hospitality Staff	
6/2010	Villa Antonio Winery	Hillsboro, Missouri
	<ul style="list-style-type: none"> ◦ Assisted with dining operations: hauled dishes, cleaned facilities, and maintained service standards ◦ Directed event parking and assisted with event setup for weddings and special occasions ◦ Harvested grapes from vineyard and transported to production facility during summer seasons 	

	Software Engineer Google Beam	1/2025–present
	Software Engineer Google Beam	9/2023– 1/2025
	Software Engineer Google Central Test Engineering	12/2019– 9/2023
	Software Engineer Garmin Safety & Datalink.....	7/2018–12/2019
	Software Engineering Intern Garmin Interfaces/Data Routing.....	8/2017– 6/2018
	Software Engineering Intern Garmin Automotive OEM.....	5/2017– 8/2017
	Bachelor of Science Missouri S&T Computer Science	1/2015–12/2018
	Team Lead, DRI Missouri S&T Satellite Team	4/2016–12/2017
	Teaching Assistant Missouri S&T Computer Science.....	8/2016– 4/2017
	Assistant Missouri S&T Computer Lab.....	1/2016– 4/2017
	Assistant Jefferson College Employment Services ..	9/2014–12/2014, 5/2015–8/2015, 5/2016– 8/2016
	Web Developer Freelance	5/2014– 8/2014
	Assistant Missouri Valley College Computer Lab	9/2013– 5/2014
	Hospitality Staff Villa Antonio Winery	6/2010–11/2012

EXPERTISE

tech	Languages Python, C++, C, Bash, SQL, LaTeX, Swift, C#, Lua, Perl           <i>Additional</i> Assembly, Lisp, Matlab, Vimscript, Basic, AppleScript, ActionScript ML/AI scikit-learn, TensorFlow, Colab, GCP Vertex AI    Tools Docker, Git, Make, regex, tmux, Vim, Xcode, CI/CD, Linux Markup CSS, HTML, JSON, Markdown, reStructuredText, XML, YAML Python Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv C++17 abseil, Boost, catch2, lldb, STL, valgrind
stats	8 consumer/enterprise products launched, 15 ⁺ interviews conducted, 1 intern mentored, 800 ⁺ CLs submitted, 300 ⁺ code reviews, 100 ⁺ bugs fixed, 9 managers reported to
awards	8 [×] Google Peer Bonus, 4 [×] Google Spot Bonus, Google Recognition Award, {Garmin new-hire, Google Noogler orientation, Google Beam semi-annual summit} trivia champion, 1 st Place MegaMiner AI, Summa Cum Laude, 6 [×] Dean's List, 18 th /229 Missouri S&T ACM Competitor

EDUCATION

12/2018	Bachelor of Science Computer Science	
1/2015	Missouri University of Science and Technology	Rolla, MO
	GPA 3.83/4.0; Major GPA 3.88/4.0	Summa Cum Laude
	Advisers Dr. Jennifer Leopold, Dr. A. Ricardo Morales, Dr. Simone Silvestri, Professor Clayton Price	
	Associations	
	◦ ACM Academy of Computing Machinery.....	2/2016–5/2018
	◦ MSAT Missouri S&T Satellite Team.....	12/2017–5/2018
	◦ IEEE Institute of Electrical and Electronics Engineers.....	1/2016–5/2017
	Coursework 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	
	Jefferson College 8/2014–12/2014 <i>A+ scholarship</i>	
	Missouri Valley College 8/2013–5/2014 <i>Track & Field scholarship</i>	
5/2013	High School	Diploma
8/2009	De Soto Senior High	De Soto, MO
	Associations 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	Sunrise R-IX School District	De Soto, MO
	Associations Cross-Country, Basketball, Computer Club, Quiz Bowl, Chess Club, Yearbook Design	
	Awards Presidential Fitness Award [x8, 2001–2009], School Speech Contest Winner	

