

ILLYA STARIKOV



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+1 ██████████

San Francisco Bay Area

ill·YAH stah·REE·kohw | He/Him |

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
Research, Labs
San Francisco Bay Area

 - Owned camera hardware-in-the-loop test (HILT) infrastructure, enabling new tests, hardware, and platforms
 - Eliminated 105-day camera HILT failure streak in first month, maintained via solving 10+ critical issues
 - Re-architected camera software updater for multi-peripheral support, integrating new hardware configurations
 - Reduced system image by 30% (700 MB), implemented CI/CD presubmit checks, and built developer tooling
 - Achieved code approval from Google Fellow **Sanjay Ghemawat** ("Sanjay Number of 1")

C++, Bash

1/2025
9/2023

Software Engineer
Google Beam
Research, Labs
San Francisco Bay Area

- Designed end-to-end factory software architecture, **adopted by Google-HP partnership**
 - Aligned 25 cross-functional stakeholders spanning engineering, security, and program management
- Built secure data pipeline between Google and HP factories, enabling real-time production monitoring
- Unified factory interface through comprehensive testing and calibration framework
 - Integrated 6 mission-critical subsystems: audio, camera, displays, lighting, OS, USB
 - Formulated system health-checking as a factory final-assembly test via a Diagnostics framework
- 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
Platforms & Devices Product Area
San Francisco Bay Area

- Shipped 10 M+ **Nest Cam, Pixel Tablet, Pixel Buds Pro 1/2** devices as factory audio software DRI
 - Optimized test execution generating \$120K annual savings: Nest Cam (52% time reduction), Pixel Tablet (23% reduction)
 - Achieved 36% faster performance than any other Google audio test suite with Nest Cam
 - Pioneered Nest's first fully-remote hardware program from prototype to mass production during COVID-19
- Built ML-driven analytics system transforming factory data into actionable insights for 7× Nest and Pixel products
 - 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
- 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 reconstructions
- Spearheaded 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 reduction
- Created foundational tools adopted organization-wide: factory data downloader, unified audio test framework, knowledge-sharing platforms
- Contributed 1.3M lines of code across 16 languages to production systems





Python matplotlib, numpy, pandas, SciPy Git

12/2019	Software Engineer	Aviation
7/2018	Garmin Safety & Datalink	Kansas City Area
▲	<ul style="list-style-type: none"> o Led system testing achieving DO-178B aviation safety compliance for GDL-60 datalink receiver <ul style="list-style-type: none"> o Designed test architecture, built infrastructure, and authored comprehensive test plans o Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux) o 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"> o Built validation system for aviation tool achieving 25% code reduction while enhancing reliability o 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"> o 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"> o Led 6-person interdisciplinary team developing nanosatellite payload with real-time stereoscopic imaging and 3D reconstruction for satellite monitoring o Architected synchronized dual-camera system on Raspberry Pi for precise, space-based stereoscopic imaging o Collaborated with chief engineer to design flight software meeting aerospace standards o Achieved critical design review approval; satellite launch scheduled for 2026 	
5/2017	Undergraduate Teaching Assistant	Computer Science
8/2016	Missouri University of Science and Technology	Rolla, MO
	<ul style="list-style-type: none"> o Taught programming fundamentals to hundreds of students across Introduction to Programming and Data Structures (class+lab) o 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"> o Created user manual adopted as standard training resource for all new assistants o 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"> o Delivered 6 client projects including websites, UI/UX design, and data analytics o Specialized in WordPress and Bootstrap for responsive web development 	
	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	8/2017– 6/2018
▲	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
	Undergraduate 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

EXPERTISE

tech	Languages Python, C++, C, Bash, SQL, LaTeX, Swift, C#, Lua, Perl           <i>Additional</i> Assembly, Lisp, Matlab, Vimscrip, 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, Google, Starline} trivia champion, 1 st Place MegaMiner AI, Summa Cum Laude honors, 6 [×] Dean's List, 18 th /229 Missouri S&T ACM Competitor

EDUCATION

12/2018	Bachelor of Science Computer Science	
1/2018	Missouri University of Science and Technology	Rolla, MO
	GPA 3.83/4.0 ; Major GPA 3.88/4.0 ; 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	Summa Cum Laude
	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 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)	De Soto, MO
		
5/2009	Elementary, Middle School	diploma
8/2000	Sunrise R-IX School District Associations Cross-Country, Basketball, Computer Club, Quiz Bowl, Chess Club, Yearbook Design Awards Presidential Fitness Award [x8, 2001–2009], School Speech Contest Winner	De Soto, MO
