

ILLYA STARIKOV



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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
	Rehired 5/2015–8/2015, 5/2016–8/2016 <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	
1/2015	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	