

ILLYA STARIKOV

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Software Engineer, Google, 8 years. Shipped **10M+** Pixel, Nest, and Beam devices. Built ML systems across **7** product lines: anomaly detection via clustering, failure classification (**98.5%** accuracy), quality regression (± 0.5 dB). Production-hardened, research-ready.

EXPERIENCE

	Software Engineer	<i>Research, Labs</i>
	Google Beam	<i>San Francisco Bay Area</i>
1/2025	Camera Team	
	<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 within 1 month of start-date, resolved 10+ blocking issuesCollaborated with team to improve pass rate from 30% to 100%, grow suite from 10 to 30+ testsRe-architected camera software updater for multi-peripheral support, integrating new hardware configurationsDrove cross-platform integration spanning device state management, client services, networking, and OS layers	
9/2023	Platforms	
	<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 monitoringUnified factory interface through comprehensive testing and calibration framework<ul style="list-style-type: none">Formulated system health-checking as a factory final-assembly test via a Diagnostics frameworkIntegrated 6 mission-critical subsystems: audio, camera, displays, lighting, OS, USBAutomated 25+ manual preflight tests, saving 2+ days of engineer time in 2024 alone	
9/2023	Software Engineer	<i>Platforms & Devices Product Area</i>
	Google Central Test Engineering	<i>San Francisco Bay Area</i>
	<ul style="list-style-type: none">Shipped 10M+ Nest Cam, Pixel Tablet, Pixel Buds Pro/2 devices as factory audio software DRI<ul style="list-style-type: none">Saved \$120k in capex via test code optimizations: Nest Cam (52% time reduced), Pixel Tablet (23%)Shipped 6 ML analytics models for automated fault detection across 7 Nest/Pixel products<ul style="list-style-type: none">Applied clustering to surface 10+ previously unknown defect patterns, generating labeled datasetsBuilt classification models achieving 98.5% accuracy, automating defect detectionDeveloped regression models predicting quality metrics within ± 0.5 dB, replacing manual measurementMentored 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	
12/2019		
12/2019	Software Engineer	<i>Aviation</i>
	Garmin Safety & Datalink	<i>Kansas City Area</i>
	<ul style="list-style-type: none">Led system testing achieving DO-178B aviation safety compliance for GDL-60 datalink receiver	
7/2018	<ul style="list-style-type: none">Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux)	
	<ul style="list-style-type: none">Software Engineering Intern Garmin Interfaces/Data Routing 8/2017– 6/2018Software Engineering Intern Garmin Automotive OEM 5/2017– 8/2017Research & Teaching Assistant Missouri S&T Computer Science 8/2016– 4/2017	
	artificial	AI algorithms: evolutionary SAT solver, chess engine with minimax/alpha-beta, A* puzzle solver.
	starikov.co	Independent technical writing on AI, computer science, and mathematics. 70+ posts, 14k views/year.
	.dotfiles	Multi-platform, enterprise-grade development environment with 80+ plugins, and 10+ shell tools.

EXPERTISE

tech	Languages	Python, C++, C, Bash, SQL
	ML/AI	scikit-learn, TensorFlow, Colab, GCP Vertex AI
	Tools	Docker, Git, Make, regex, tmux, Vim, Xcode, CI/CD, Linux
	Python	Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv
	C++17	abseil, Boost, catch2, lldb, STL, valgrind
misc	8 products launched, 25+ interviews conducted, 1 intern mentored, 8x Google Peer Bonus, 5x Google Spot Bonus, Google "Thank You" campaign recipient, Summa Cum Laude, 1st Place MegaMiner AI	

EDUCATION

12/2018	Bachelor of Science Computer Science	
	Missouri University of Science and Technology	<i>Rolla, MO</i>