

# ILLYA STARIKOV

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San Francisco Bay Area  
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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 ( $\pm 0.5$  dB). Production-hardened, research-ready.

## EXPERIENCE

	<b>Software Engineer</b>	<i>Research, Labs</i>
	<b>Google Beam</b>	<i>San Francisco Bay Area</i>
1/2025	<b>Camera Team</b>	
	<ul style="list-style-type: none"><li>Owned camera hardware-in-the-loop test (HILT) infrastructure, enabling new tests, hardware, and platforms<ul style="list-style-type: none"><li>Eliminated <b>105-day</b> camera HILT failure streak within <b>1 month</b> of start-date, resolved <b>10+</b> blocking issues</li><li>Collaborated with team to improve pass rate from <b>30%</b> to <b>100%</b>, grow suite from <b>10</b> to <b>30+</b> tests</li></ul></li><li>Re-architected camera software updater for multi-peripheral support, integrating new hardware configurations</li><li>Drove cross-platform integration spanning device state management, client services, networking, and OS layers</li><li>Earned code approval from Google Fellow <b>Sanjay Ghemawat</b> ("Sanjay Number of 1")</li></ul>	
9/2023	<b>Platform Team</b>	
	<ul style="list-style-type: none"><li>Designed factory software architecture <b>adopted by Google-HP partnership</b> for Beam manufacturing<ul style="list-style-type: none"><li>Aligned <b>25</b> cross-functional stakeholders spanning engineering, security, and program management</li></ul></li><li>Built secure data pipeline between Google and HP factories, enabling real-time production monitoring</li><li>Unified factory interface through comprehensive testing, calibration and diagnostics framework<ul style="list-style-type: none"><li>Integrated <b>6</b> mission-critical subsystems: audio, camera, displays, lighting, OS, USB</li></ul></li><li>Automated <b>25+</b> manual preflight tests, saving <b>2+</b> days of engineer time in 2024 alone</li></ul>	
9/2023	<b>Software Engineer</b>	<i>Platforms &amp; Devices Product Area</i>
	<b>Google Central Test Engineering</b>	<i>San Francisco Bay Area</i>
	<ul style="list-style-type: none"><li>Shipped <b>10M+ Nest Cam, Pixel Tablet, Pixel Buds Pro/2</b> devices as factory audio software DRI<ul style="list-style-type: none"><li>Saved <b>\$120k</b> in capex via test code optimizations: Nest Cam (<b>52%</b> time reduced), Pixel Tablet (<b>23%</b>)</li></ul></li><li>Shipped <b>6</b> ML analytics models for automated fault detection across <b>7</b> Nest/Pixel products<ul style="list-style-type: none"><li>Applied clustering to surface <b>10+</b> previously unknown defect patterns, generating labeled datasets</li><li>Built classification models achieving <b>98.5%</b> accuracy, automating defect detection</li><li>Developed regression models predicting quality metrics within <b><math>\pm 0.5</math> dB</b>, replacing manual measurement</li></ul></li><li>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</li></ul>	
12/2019		
12/2019	<b>Software Engineer</b>	<i>Aviation</i>
	<b>Garmin Safety &amp; Datalink</b>	<i>Kansas City Area</i>
	<ul style="list-style-type: none"><li>Led system testing achieving DO-178B aviation safety compliance for <b>GDL-60</b> datalink receiver</li></ul>	
7/2018	<ul style="list-style-type: none"><li>Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux)</li></ul>	
	<ul style="list-style-type: none"><li><b>Software Engineering Intern Garmin</b> Interfaces/Data Routing ..... 8/2017– 6/2018</li><li><b>Software Engineering Intern Garmin</b> Automotive OEM ..... 5/2017– 8/2017</li><li><b>Research &amp; Teaching Assistant Missouri S&amp;T</b> Computer Science ..... 8/2016– 4/2017</li></ul>	
	<b>artificial</b>	AI algorithms: evolutionary SAT solver, chess engine with minimax/alpha-beta, A* puzzle solver.
	<b>starikov.co</b>	Independent technical writing on AI, computer science, and mathematics. <b>70+</b> posts, <b>14k</b> views/year.
	<b>.dotfiles</b>	Multi-platform, enterprise-grade development environment with <b>80+</b> plugins, and <b>10+</b> shell tools.

## EXPERTISE

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

## EDUCATION

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