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

Software Engineer	*Research, Labs*
Google Beam	*San Francisco Bay Area*

1/2025

Camera Team
- Owned camera hardware-in-the-loop test (HILT) infrastructure, enabling new tests, hardware, and platforms
  - Eliminated **105**-day camera HILT failure streak within **1** month of start-date, resolved **10+** blocking issues
  - Collaborated with team to improve pass rate from **30%** to **100%**, grow suite from **10** to **30+** tests
- Re-architected camera software updater for multi-peripheral support, integrating new hardware configurations
- Drove cross-platform integration spanning device state management, client services, networking, and OS layers
- Earned code approval from Google Fellow **Sanjay Ghemawat** ("Sanjay Number of **1**")

9/2023

Platform Team
- Designed factory software architecture **adopted by Google-HP partnership** for Beam manufacturing
  - 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, calibration and diagnostics framework
  - Integrated **6** mission-critical subsystems: audio, camera, displays, lighting, OS, USB
- Automated **25+** manual preflight tests, saving **2+** days of engineer time in 2024 alone

9/2023

Software Engineer	*Platforms & Devices Product Area*
Google Central Test Engineering	*San Francisco Bay Area*

- Shipped **10M+ Nest Cam, Pixel Tablet, Pixel Buds Pro/2** devices as factory audio software DRI
  - 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
  - Applied clustering to surface **10+** previously unknown defect patterns, generating labeled datasets
  - Built classification models achieving **98.5%** accuracy, automating defect detection
  - Developed regression models predicting quality metrics within $\pm$**0.5 dB**, replacing manual measurement
- 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

12/2019

Software Engineer	*Aviation*
Garmin Safety & Datalink	*Kansas City Area*

- Led system testing achieving DO-178B aviation safety compliance for **GDL**-**60** datalink receiver
- Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux)

7/2018

Software Engineering Intern **Garmin** Interfaces/Data Routing 8/2017– 6/2018
Software Engineering Intern **Garmin** Automotive OEM... 5/2017– 8/2017
Research & 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	*Rolla, MO*