ILLYA STARIKOV

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San Francisco Bay Area
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ill·YAH stah·REE·kohw | **He/Him** |

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 — *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

9/2023 **Platforms**

- 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
  - Formulated system health-checking as a factory final-assembly test via a 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 ±**0.5 dB**, replacing manual measurement
- Mentored intern who built a data fusion of {"3D" Lidar + "2D" photos}, implementing feature matching via ML
12/2019 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
7/2018 - Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux)

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, hill climbing.
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, E2E tests, 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*