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** — *Research, Labs*
Google Beam — *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

1/2025 – 9/2023 | **Software Engineer** — *Research, Labs*
Google Beam — *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

9/2023 – 12/2019 | **Software Engineer** — *Platforms & Devices Product Area*
Google Central Test Engineering — *San Francisco Bay Area*
- Shipped **10** M+ **Nest Cam, Pixel Tablet, Pixel Buds Pro 1/2** devices as factory audio software DRI
- 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

12/2019 – 7/2018 | **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)

Software Engineering Intern **Garmin** Interfaces/Data Routing 8/2017– 6/2018
Software Engineering Intern **Garmin** Automotive OEM 5/2017– 8/2017
Team Lead & DRI **Missouri S&T Satellite Team** 4/2016–12/2017
Undergraduate Teaching Assistant **Missouri S&T** Computer Science 8/2016– 4/2017

EXPERTISE

tech
Languages Python, C++, C, Bash, SQL, LaTeX, Swift, C#, Lua, Perl
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

impact
8 products launched, **15+** interviews conducted, **1** intern mentored, **800+** CLs submitted, **300+** code reviews, **100+** bugs fixed, **9** managers, **8×** Google Peer Bonus, **4×** Google Spot Bonus, Google Recognition Award, **1st** Place MegaMiner AI, Summa Cum Laude honors, **6×** Dean's List, **18th/229** S&T programmer

EDUCATION

12/2018 | **Bachelor of Science** Computer Science
Missouri University of Science and Technology — *Rolla, MO*
Coursework Artificial Intelligence, Evolutionary Computing, Data Mining, Object-Oriented Numerical Modeling, Analysis of Algorithms, Undergraduate Research, Differential Equations, Calculus, Linear Algebra, Statistics, Modern Physics