

# 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  | <b>Software Engineer</b>   | Research, Labs                   |
|         | <b>Google</b> Beam   | San Francisco Bay Area           |
|         | <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 105-day camera HILT failure streak <math>\in</math> 1 month of start-date, resolved 10<sup>+</sup> blocking issues</li></ul></li><li>Re-architected camera software updater for multi-peripheral support, integrating new hardware configurations</li><li>Reduced system image by 30% (700 MB), implemented CI/CD presubmit checks, and built developer tooling</li></ul>  |                                  |
| 1/2025  | <b>Software Engineer</b>   | Research, Labs                   |
| 9/2023  | <b>Google</b> Beam   | San Francisco Bay Area           |
|         | <ul style="list-style-type: none"><li>Designed end-to-end factory software architecture, <b>adopted by Google-HP partnership</b><ul style="list-style-type: none"><li>Aligned 25 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 and calibration framework<ul style="list-style-type: none"><li>Integrated 6 mission-critical subsystems: audio, camera, displays, lighting, OS, USB</li><li>Formulated system health-checking as a factory final-assembly test via a Diagnostics framework</li></ul></li><li>Automated 25<sup>+</sup> manual preflight tests, saving 2<sup>+</sup> days of engineer time in 2024 alone</li></ul>  |                                  |
| 9/2023  | <b>Software Engineer</b>   | Platforms & Devices Product Area |
| 12/2019 | <b>Google</b> Central Test Engineering   | San Francisco Bay Area           |
|         | <ul style="list-style-type: none"><li>Shipped 10 M<sup>+</sup> <b>Nest Cam, Pixel Tablet, Pixel Buds Pro 1/2</b> devices as factory audio software DRI<ul style="list-style-type: none"><li>Optimized test execution generating \$120 k capex savings: Nest Cam (52% time reduced), Pixel Tablet (23%)</li></ul></li><li>Built ML-driven analytics system transforming factory data into actionable insights for 7<sup>×</sup> Nest and Pixel products<ul style="list-style-type: none"><li>Deployed 6 ML applications: clustering novel failure patterns to make 10<sup>+</sup> datasets, classification of said patterns with 98.5% accuracy, regression for additional quality metrics within 1/2 dB accuracy</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 | <b>Software Engineer</b>   | Aviation                         |
| 7/2018  | <b>Garmin</b> Safety & Datalink  | Kansas City Area                 |
|         | <ul style="list-style-type: none"><li>Led system testing achieving DO-178B aviation safety compliance for <b>GDL-60</b> datalink receiver</li><li>Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux)</li></ul>  |                                  |
|         | Software Engineering Intern <b>Garmin</b> Interfaces/Data Routing .....  | 8/2017– 6/2018                   |
|         | Software Engineering Intern <b>Garmin</b> Automotive OEM .....   | 5/2017– 8/2017                   |
|         | Team Lead & DRI <b>Missouri S&amp;T Satellite Team</b> .....   | 4/2016–12/2017                   |
|         | Undergraduate Teaching Assistant <b>Missouri S&amp;T</b> Computer Science .....  | 8/2016– 4/2017                   |

## EXPERTISE

|        |   |  |
|--------|---|--|
| tech   | <b>Languages</b> Python, C++, C, Bash, SQL, LaTeX, Swift, C#, Lua, Perl   |  |
|        | <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   |  |
| impact | 8 products launched, 15 <sup>+</sup> interviews conducted, 1 intern mentored, 800 <sup>+</sup> CLs submitted, 300 <sup>+</sup> code reviews, 100 <sup>+</sup> bugs fixed, 9 managers, 8 <sup>×</sup> Google Peer Bonus, 4 <sup>×</sup> Google Spot Bonus, Google Recognition Award, 1 <sup>st</sup> Place MegaMiner AI, Summa Cum Laude, 6 <sup>×</sup> Dean's List, 18 <sup>th</sup> /229 S&T programmer |  |

## EDUCATION

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