

# ILLYA STARIKOV

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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 ( $\pm 0.5$  dB). Production-hardened, research-ready.

## EXPERIENCE

|         |   |  |
|---------|---|--|
| 1/2025  | <b>Software Engineer</b><br>Google Beam<br>Camera Team  | Research, Labs<br>San Francisco Bay Area                   |
| 9/2023  | <b>Platform 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 105-day camera HILT failure streak within 1 month of start-date, resolved 10+ blocking issues</li><li>Collaborated with team to improve pass rate from 30% to 100%, grow suite from 10 to 30+ 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> for fixing company-wide documentation</li></ul>  |  |
| 9/2023  | <b>Software Engineer</b><br>Google Central Test Engineering   | Platforms & Devices Product Area<br>San Francisco Bay Area |
| 12/2019 | <ul style="list-style-type: none"><li>Shipped 10M+ Nest Cam, Pixel Tablet, Pixel Buds Pro/2 devices as factory audio software DRI<ul style="list-style-type: none"><li>Saved \$120k in capex via test code optimizations: Nest Cam (52% time reduced), Pixel Tablet (23%)</li></ul></li><li>Shipped 6 ML analytics models for automated fault detection across 7 Nest/Pixel products<ul style="list-style-type: none"><li>Applied clustering to surface 10+ previously unknown defect patterns, generating labeled datasets</li><li>Built classification models achieving 98.5% accuracy, automating defect detection</li><li>Developed regression models predicting quality metrics within <math>\pm 0.5</math> dB, 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 | <b>Software Engineer</b><br>Garmin Safety & Datalink  | Aviation<br>Kansas City Area                               |
| 7/2018  | <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>   |  |
|         | <ul style="list-style-type: none"><li> Software Engineering Intern Garmin Interfaces/Data Routing .....</li><li> Software Engineering Intern Garmin Automotive OEM .....</li><li> Research &amp; Teaching Assistant Missouri S&amp;T Computer Science .....</li></ul>  | 8/2017– 6/2018<br>5/2017– 8/2017<br>8/2016– 4/2017         |
|         | <ul style="list-style-type: none"><li> <b>artificial</b> AI algorithms: evolutionary SAT solver, chess engine with minimax/alpha-beta, A* puzzle solver.</li><li> <b>starikov.co</b> Independent technical writing on AI, computer science, and mathematics. 70+ posts, 14k views/year.</li><li> <b>.dotfiles</b> Multi-platform, enterprise-grade development environment with 80+ plugins, and 10+ shell tools.</li></ul>  |  |

## EXPERTISE

|      |   |  |
|------|---|--|
| tech | <b>Languages</b> Python, C++, C, Bash, SQL<br><b>ML/AI</b> scikit-learn, TensorFlow, Colab, GCP Vertex AI<br><b>Tools</b> Docker, Git, Make, regex, tmux, Vim, Xcode, CI/CD, Linux<br><b>Python</b> Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv |  |
| 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 | <b>Bachelor of Science</b> Computer Science<br>Missouri University of Science and Technology | Rolla, MO |
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