

# ILLYA STARIKOV





















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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


12/2019	<b>Software Engineer</b> <b>Garmin</b> Safety & Datalink	Aviation 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 <ul style="list-style-type: none"> <li>◦ Designed test architecture, built infrastructure, and authored comprehensive test plans</li> </ul> </li> <li>◦ Developed embedded software enabling configuration sync across dual OS environments (Garmin, Linux)</li> <li>◦ Led STEM outreach: hovercraft engineering project (presented at Kansas State ACM), mentored Bring Your Child To Work Day, conducted facility tours</li> </ul>	
7/2018	  Git	
7/2018	<b>Software Engineering Intern</b> <b>Garmin</b> Interfaces/Data Routing	Aviation Rolla, MO
8/2017	<ul style="list-style-type: none"> <li>◦ Built validation system for aviation tool achieving <b>25%</b> code reduction while enhancing reliability</li> <li>◦ Delivered <b>10+</b> quality-of-life enhancements for aforementioned aviation tool</li> </ul>	
8/2017	<b>Software Engineering Intern</b> <b>Garmin</b>	Automotive OEM Los Angeles
5/2017	<ul style="list-style-type: none"> <li>◦ Improved automation suite reliability from <b>80%</b> to <b>100%</b> and achieved <b>5x</b> speed improvement through API optimization</li> </ul>  Visual Studio	
12/2017	<b>Team Lead, DRI</b>  <b>Missouri S&amp;T Satellite Team</b> Stereoscopic Imaging	Aerospace Rolla, MO
	<ul style="list-style-type: none"> <li>◦ Led <b>6</b>-person interdisciplinary team developing nanosatellite payload with real-time stereoscopic imaging and 3D reconstruction for satellite monitoring</li> <li>◦ Architected synchronized dual-camera system on Raspberry Pi for precise, space-based stereoscopic imaging</li> <li>◦ Collaborated with chief engineer to design flight software meeting aerospace standards</li> </ul>	
4/2016	◦ Achieved critical design review approval; satellite launch scheduled for 2026	
5/2017	<b>Research &amp; Teaching Assistant</b> <b>Missouri University of Science and Technology</b>	Computer Science Rolla, MO
	<ul style="list-style-type: none"> <li>◦ Built discriminative subgraph algorithm comparing execution traces from correct vs. faulty runs to automatically pinpoint buggy code</li> <li>◦ Taught programming fundamentals to hundreds of students across 4x classes and labs instances of Introduction to Programming and Data Structures</li> <li>◦ Successfully detected plagiarism, style infractions, and bugs via self-developed automation using Stanford's MOSS</li> </ul>	
8/2016		
12/2014	<b>Assistant</b>  <b>Jefferson College</b>	Employment Services Hillsboro, MO
	Rehired 5/2015–8/2015, 5/2016–8/2016	
9/2014	<ul style="list-style-type: none"> <li>◦ Created user manual adopted as standard training resource for all new assistants</li> <li>◦ Managed campus-wide student employment database and designed marketing materials</li> </ul>	
8/2014	<b>Web Developer</b> <b>Freelance</b>	De Soto, MO
5/2014	<ul style="list-style-type: none"> <li>◦ Delivered <b>6</b> client projects including websites, UI/UX design, and data analytics</li> <li>◦ Specialized in WordPress and Bootstrap for responsive web development</li> </ul>	
5/2014	<b>Assistant</b>  <b>Missouri Valley College</b>	Computer Lab Marshall, MO
	<ul style="list-style-type: none"> <li>◦ Provided technical support to students with Visual Basic, C, and C++ programming assignments and projects</li> <li>◦ Coached students in a diverse array of computer applications (Microsoft Suite, Visual Studio, etc.) and programming concepts, debugging techniques, and best practices for software development</li> <li>◦ Maintained and updated software installations across lab workstations, ensuring compatibility with coursework</li> </ul>	
9/2013		





11/2012	 <b>Hospitality Staff</b>	
	<b>Villa Antonio Winery</b>	<i>Hillsboro, Missouri</i>
	<ul style="list-style-type: none"> <li>Assisted with dining operations: hauled dishes, cleaned facilities, and maintained service standards</li> <li>Directed event parking and assisted with event setup for weddings and special occasions</li> </ul>	
6/2010	 <b>Software Engineer Google</b>	Beam ..... 1/2025–present
	 <b>Software Engineer Google</b>	Beam ..... 9/2023– 1/2025
	 <b>Software Engineer Google</b>	Central Test Engineering ..... 12/2019– 9/2023
	 <b>Software Engineer Garmin</b>	Safety & Datalink ..... 7/2018–12/2019
	 <b>Software Engineering Intern Garmin</b>	Interfaces/Data Routing ..... 8/2017– 6/2018
	 <b>Software Engineering Intern Garmin</b>	Automotive OEM ..... 5/2017– 8/2017
	 <b>Bachelor of Science Missouri S&amp;T</b>	Computer Science ..... 1/2015–12/2018
	 <b>Team Lead, DRI Missouri S&amp;T</b>	Satellite Team ..... 4/2016–12/2017
	 <b>Research &amp; Teaching Assistant Missouri S&amp;T</b>	Computer Science ..... 8/2016– 4/2017
	 <b>Assistant Missouri S&amp;T</b>	Computer Lab ..... 1/2016– 4/2017
	 <b>Assistant Jefferson College</b>	Employment Services... 9/2014–12/2014, 5/2015–8/2015, 5/2016– 8/2016
	 <b>Web Developer Freelance</b>	..... 5/2014– 8/2014
	 <b>Assistant Missouri Valley College</b>	Computer Lab ..... 9/2013– 5/2014
	 <b>Hospitality Staff Villa Antonio Winery</b>	..... 6/2010–11/2012
	 <b>artificial</b>	AI algorithms: evolutionary SAT solver, chess engine with minimax/alpha-beta, A* puzzle solver.
	 <b>starikov.co</b>	Independent technical writing on AI, computer science, and mathematics. <b>70+</b> posts, <b>14k</b> views/year.
	 <b>.dotfiles</b>	Multi-platform, enterprise-grade development environment with <b>80+</b> plugins, and <b>10+</b> shell tools.

## EXPERTISE

tech	<b>Languages</b>	Python, C++, C, Bash, SQL
	<b>Additional</b>	LaTeX, Swift, C#, Lua, Perl, Assembly, Lisp, Matlab, Vimscript, Basic, AppleScript, ActionScript
	<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>Markup</b>	CSS, HTML, JSON, Markdown, reStructuredText, XML, YAML
	<b>Python</b>	Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv
	<b>C++17</b>	abseil, Boost, catch2, lldb, STL, valgrind
impact	<b>8</b>	consumer/enterprise products launched, <b>25+</b> interviews conducted, <b>1</b> intern mentored, <b>800+</b> CLs submitted, <b>300+</b> code reviews, <b>100+</b> bugs fixed, <b>9</b> managers reported to
awards	<b>8x</b>	Google Peer Bonus, <b>5x</b> Google Spot Bonus, Google “Thank You” campaign recipient, {Garmin new-hire, Google Noogler orientation, Google Beam semi-annual summit} trivia champion, Summa Cum Laude, <b>1st</b> Place MegaMiner AI, <b>6x</b> Dean’s List, <b>18th/229</b> Missouri S&T ACM Competitor

## EDUCATION

12/2018	<b>Bachelor of Science</b>	Computer Science
1/2015	<b>Missouri University of Science and Technology</b>	<i>Rolla, MO</i>
	 <b>GPA 3.83/4.0; Major GPA 3.88/4.0</b>	<i>Summa Cum Laude</i>
	<b>Advisers</b>	Dr. Jennifer Leopold, Dr. A. Ricardo Morales, Dr. Simone Silvestri, Professor Clayton Price
	<b>Associations</b>	
	o <b>ACM</b>	Academy of Computing Machinery ..... 2/2016–5/2018
	o <b>MSAT</b>	Missouri S&T Satellite Team ..... 12/2017–5/2018
	o <b>IEEE</b>	Institute of Electrical and Electronics Engineers ..... 1/2016–5/2017
	<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, Physics, Discrete Mathematics, Web Design, Micro Embedded Design, Chemistry

	Private Pilot Ground School 3/2019–5/2019	
	<b>Jefferson College</b> 8/2014–12/2014 <i>A+ scholarship</i>	
	<b>Missouri Valley College</b> 8/2013–5/2014 <i>Track &amp; Field scholarship</i>	
5/2013	High School	<i>Diploma</i>
8/2009	<b>De Soto Senior High</b>	<i>De Soto, MO</i>
	<b>Associations</b> Cross-Country (Class <b>3</b> , <b>2x</b> All-District individual [2011–2012], <b>1x</b> All-District team [2012], <b>#5</b> team state ranking [2012]), Track & Field, Future Business Leaders of America (FBLA)	
5/2009	Elementary, Middle School	<i>Diploma</i>
8/2000	<b>Sunrise R-IX School District</b>	<i>De Soto, MO</i>
	<b>Associations</b> Cross-Country, Basketball, Computer Club, Quiz Bowl, Chess Club, Yearbook Design <b>Awards</b> Presidential Fitness Award [x8, 2001–2009], School Speech Contest Winner	