DREW DELONG

Software Engineer
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A technical leader with a decade of experience designing, building, and launching cutting-edge software systems. See my website, delong.ai, for more projects I've worked on.

Work Experience

Senior Software Engineer

Arnold Engineering Dev. Complex, Arnold AFB — Feb 2024 - Current

- Created and led development of a new software suite (using Python, Linux, React, Node) that equipped upper management with the tools to secure millions of dollars in additional funding for my branch.
- Championed implementation of modern software tooling and pipelines that quadrupled developer productivity until it was adopted across my entire division of 200+ employees
- Redesigned and implemented new distributed visualization system that enabled remote vision into and analysis of Air Force production facilities from anywhere with Internet. A revolutionary new capability previously impossible.

Founder, Technology Chief

Johnson, Hall & Delong Strategies — Aug 2024 - Current

- Architected a new AI audio system (using Python, Edge computing, AWS, Llama, custom GPTs, and more) for in-person sales teams that unveils never-before-seen metrics that redefine a businesses' ability to fine-tune sales strategies.
- Within four months, JHD's Argus AI has been deployed to four customers, collecting and processing nearly 1,400 hours of audio data per week. See https://demo.jhd.group for an example dashboard.

Software Consultant

Delong.ai — Jun 2022 - Jul 2024

- Led the development of new financial services software to enable automated asset management using NodeJS, Solidity, Python, and AWS.
- Debugged critical JavaScript flaws in the IoT production code base of a Fortune 500 company.
- Architected a product roadmap study for a new distributed cloud system using Python, Docker, and AWS.
- Developed a JavaScript game for a design studio's marketing campaign.

Senior Intelligence Architect

GPA — Jun 2021 - Jun 2022

- Lead engineer for a new SaaS product using Python that streamlined industrial IoT systems; met Sprint deliverables on time and launched an MVP within 4 months.
- Engineered an IoT analytics system that exponentially improved productivity by scaling from a single-user system to a concurrent system available across all departments.
- Developed and deployed a REST API using Python to a production environment that improved system efficiency and reduced the timeline for feature deployment by 2 months.

Software Lead, Co-Founder

Nuhni — May 2018 - Mar 2021

- Led all facets of Nuhni's software efforts. From developing lean software systems to automating costly tasks into scalable tools or guiding employees through code bases, my role extended across a wide breadth of topics.
- Designed and executed a profitable business model, scaled it to a valuation of over $1,500,000 with no external funding, and successfully exited.
- Created a proprietary software system using C++, Raspberry Pis, and more that allowed for 24×7 automated account management, saving 100s of hours monthly.
- Developed a SaaS product using Python and AWS that automated an arduous process within our industry, bringing in new clients and saving them 1000s of hours annually.

Research Software Engineer — U.S. Department of Energy, Y-12 NSC — May 2017 - Jan 2020

- Led the development of an AI application (Tensorflow, SAP HANA, Angular) that analyzed millions of data points to preemptively predict machine failure, enabling an exponential optimization of production uptime.
- Granted DoE research funding to architect an application utilizing reinforcement learning algorithms with Angular, Python, and MongoDB, met all deadlines, and presented progress within a year.
- Received performance award for upgrading embedded PLC control system using C/C++ that tripled the system's throughput.
- Developed and managed a large-scale C/LabVIEW codebase throughout the **most rigorous** software quality program: DoE certification for use in nuclear material production.
- Obtained a U.S DoE "Q" Clearance by demonstrating a track record of extreme reliability and trustworthiness.

Engineering Intern & Co-Op — U.S. Department of Energy, Y-12 NSC — Jun 2015 - May 2017

- Selected out of 40+ other interns to receive an exclusive offer; tuition assistance for the remainder of my undergraduate program and the ability to continue working with the DoE part-time until graduation.
- Implemented a new calibration process for vacuum systems using embedded hardware and C/C++ that reduced costs by over $315,000 per year.
- Developed a novel method that enabled printing from NI's embedded Linux hardware. Then authored a white paper on the technique that went on to be accepted by NI as the default solution to the issue.
- Utilized LabVIEW to develop applications that established complete control over several mission-critical systems.

Education

B.S. Computer Engineering — Tennessee Tech University — Aug 2013 - May 2017

Activities: Sigma Chi Fraternity, IEEE, Innovation & Entrepreneurship Program, Denso Autonomous Robotics Team, NSF iCORPS Startup Grant Recipient.

CompSci Courses: Data Structures, Algorithms, Artificial Intelligence, Cryptography, Operating Systems, Networks Calculus I/II/III, Differential Equations, Software Engineering, Probability/statistics.

Electrical Engineering Courses: Circuits I/II, Electronics Design I/II, Processor and Computer Design, Embedded Systems, Continuous and Discrete Signals/Systems, Microcomputer Systems

Physics Minor.

Skills

Python | Linux | GPTs | SQL | C/C++ | JavaScript | AI/ML | AWS | CI/CD | System Architecture