ALEX FEDIN, PRINCIPAL SOFTWARE ENGINEER
Mobile: 425-351-1652 | Email: jobs4alex@allconnectix.com
LinkedIn: linkedin.com/in/alex-fedin | GitHub: github.com/o2alexanderfedin
Website: o2.services

PROFESSIONAL SUMMARY

Principal Software Engineer with extensive experience **designing and delivering large-scale distributed systems**, **cloud solutions**, and **AI-driven platforms** for industry leaders such as **NASA, Boeing, and Microsoft**. Proficient at **leading cross-functional teams**, orchestrating **complex data architecture** transformations, and continuously optimizing performance in mission-critical applications. Committed to **Agile/XP methodologies**, **cutting-edge prototyping**, and **mentoring technical talent** to drive innovation and measurable results.

CORE COMPETENCIES

- Cloud Architecture (AWS, Azure)
- Distributed Systems & Microservices
- AI & Large Language Models (OpenAI, Bard, LLaMA)
- Performance Optimization & Data Pipelines
- Agile/XP & TDD Methodologies
- Cross-Functional Leadership
- Systems Integration & API Design
- High-Throughput Data Processing

PROFESSIONAL EXPERIENCE

Waymo (Google Alphabet) | Senior SDE | Sep 2024–Dec 2024

- On a short assignment, picked up work items of two google engineers who were on a long leave.
- Designed and implemented a bunch of sophisticated UI Angular-based components for the Simulation team.
- Helped to establish the environment for the contractors onboarding, as I was the very first one joined the team.
- Managed to do my work even with very limiting permissions (if compared that to whatever is available to FTEs).

O2.services | Founder & Principal Software Engineer | Jun 2018–Present

- Prototyped a globally distributed, peer-to-peer cloud, reducing hosting costs by ~20% through optimized resource utilization.
- Engineered a self-guided agentic system, which enhanced autonomy and decreased manual intervention by approximately 30%, serving as a supervisory layer for AI-driven IDEs.
- Developed an OpenAI-powered, semantically searchable knowledge base, slashing user search times by ~40% and accelerating decision-making.
- Prototyped a Startup Cyber-Assistant to help emerging companies prepare funding materials, broadening the consultancy's service offerings.
- **Tech Used**: C++, C#/.NET, TypeScript, Node.js, Distributed Hash Table (DHT), Torrent, IPFS, WebAssembly, Azure, Serverless Computing

NASA | Principal Software Engineer | Oct 2018–Feb 2022

- Optimized drone telemetry pipelines, cutting data processing time by ~20% and enhancing situational awareness for the UTM (Unmanned Traffic Management) initiative.
- Led a MATLAB-to-Nvidia CUDA C++ transpiler project, boosting development speeds by ~200% for high-fidelity drone models.
- Championed Agile development, reducing release cycles by ~20% and improving cross-team collaboration.
- **Tech Used**: Java, C++, CUDA, MATLAB, C#/.NET, Unity, Docker, AWS, Azure

Accuray, Inc. | Software Architect | Jul 2017–Aug 2018

- Refactored on-premises healthcare services, lowering error rates by ~15% and ensuring seamless radiation therapy data reliability.
- Migrated legacy Silverlight apps to modern frameworks, expanding cross-platform support and streamlining maintenance.
- **Tech Used**: C++, Java, C#/.NET, Silverlight, Angular, Windows Azure

Tesla Motors | Senior Software Engineer (Supply Chain) | Oct 2015–Jul 2017

- Implemented microservices for Gigafactory supply chain, decreasing downtime by 15% and enabling real-time tracking of parts and inventory.
- Collaborated with manufacturing and operations teams to ensure consistent architecture and on-schedule rollouts.

- **Tech Used**: Java, C#/.NET, TypeScript, MS SQL Server, REST

VISA BI Department | Senior Architect & Developer | May 2014–Oct 2015

- Overhauled a naively designed BI system, cutting query times by 50% and improving overall system throughput by 60%.
- Built a VBA-to-VB.NET transpiler, reducing manual macro migration and accelerating adoption of modern .NET modules.
- **Tech Used**: C#/.NET, MS Orleans (Actor Framework), OpenXml, Excel, PowerPoint

Boeing Defense | Lead Software Engineer | Jun 2012–Apr 2014

- Cut verification time by 35% with an automated .NET-based testing platform for laser weapon systems (CLWS/HEL MD).
- Led a small engineering team, delivering robust solutions on schedule and conforming to defense requirements.
- **Tech Used**: C#/.NET, Windows Workflow Foundation, MS SQL Server

Geico Insurance | Architect & Technical Lead (Data Layer) | Jan 2011–Jun 2012

- Led data-related layers, including DB migrations from IBM DB2 to MS SQL Server, enabling a 25% cost reduction through mainframe-to-cloud modernization.
- Drove TDD and Pair Programming, shortening defect resolution times and boosting developer productivity.
- **Tech Used**: C#, .NET, ASP.NET MVC, WCF, WWF, SQL Server

Microsoft | Senior Software Developer | May 2005–Dec 2010

- Delivered UI enhancements for Silverlight components and VE Map Control.
- Built an internal JavaScript Automation Framework, streamlining UI testing and improving QA cycles.
- **Tech Used**: C#/.NET, JavaScript, XAML, COM/DCOM

Wachovia Securities | Assistant Architect | May 2004–Apr 2005

- Reduced transaction errors in global trading by enhancing cross-region date handling.
- Adopted TDD, lowering critical bugs by ~25%.

- **Tech Used**: VB6, Delphi

Lehman Brothers | Support Engineer | Feb 2004–May 2004

- Maintained high-integrity data feeds (Bloomberg, Reuters), streamlining overnight processes to reduce data latency.

Deutsche Bank EMEA | Lead Software Engineer | 2003–2004

- Modernized trader-facing applications, boosting transaction speed and responsiveness for global markets.
- **Tech Used**: .NET, Java Swing (migration projects)

Gemalto | Senior Software Developer | 2002–2003

- Enabled mobile financial transactions on SIM cards, reducing transaction delays by ~20% for telecom providers.

DELL Computers | Team Lead (Automated Control Framework) | 2001–2002

- Overhauled factory automation in DELL EMEA plants, minimizing conveyor downtime and increasing throughput by ~40%.
- **Tech Used**: COM/DCOM, Custom Queued Components, Windows

EDUCATION

- Master's in Electromechanical Engineering
  Ural State Railway Institute, Ekaterinburg, Russia (1988–1994)