

# Robert Fielding

Backend programmer with 30 years of fully technical experience -  
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## EXPERIENCE

### ZetaBravo -- AI dev

May 20255 -July 2025

AI dev with Python and React, as a backend dev. Used langgraph, and ollama in-house server. Mostly doing performance measurement, bug fixing and testing. This was mostly a tool-calling app for generic LLMs.

### Great Harvest

February 20255 March 2025

In order to not sit around waiting for tech interviews, I got a job in a bakery making bread..

### Leidos —Computer Programmer

September 2023 - October 2024

Worked on the Prosight project at Leidos, which is a very successful and high-profile airport physical security project. I mostly worked on the body scanner, to get it integrated into the Prosight network. I also worked on the Explosives and Drugs detection machine to get that also integrated into the network. To a lesser degree, I also worked on the carry-on bag scanner machines as well. I got the integration with Keycloak working on these devices; which involved C# and Golang. Much of the work involved traveling on-site to do the reverse-engineering work; capturing network HTTPS with a proxy to reverse engineer protocols. Was on a Tabular data generation project, to train models with Pytorch/Python.

C# 9 months

Go 9 months

Python/Pytorch 3 months

Cryptography/mTLS 4 months

### greymatter.io, Alexandria VA — Computer Programmer

October 2015 - July 2023

Worked for a hybrid commercial/government startup from its inception. I introduced Go into the company. The major product that I worked on

## SKILLS

Go, Java, Python, C.  
Performance testing, build automation, security analysis, cryptography.

## AWARDS

**2015 Application Of The Year**  
Defense Intelligence Agency awarded us for our work on Object Drive, for a CAPCO/NATO classification protected dropbox-like application with full-text searching.

## LANGUAGES

Go, Java, Python, C, bash, etc.  
Some C#, Javascript, etc.  
OpenSCAD (3D printing),  
Arduino (embedded hardware C++). Erlang, Lean4, TLA+.

(commercial side, delivering to government), was a very successful service for handling file uploads (hundreds of terabytes in production, and in production for many years with few major bugs. It allowed for high performance audio, video, document attachments with enforced security labels, and made of Go, S3, MySQL; using nginx/gatekeeper/mTLS for the mesh. I also worked on iterations of its successor that also supported non-government uses, prototyped in Python, similarly made of Go, S3, MongoDB. Used AWSRekognition AI to recognize faces, label content, detect inappropriate content, and navigate between familiar faces; in addition to ElasticSearch indexing all results (including the ML labeling). Got reinforcement learning tasks GPU automated for intern teams.

Golang 8 years  
Java 4 years (intermittent fixing dependencies as needed)  
MySQL 4 years  
Mongodb 4 years  
Docker 8 years  
Linux 8 years  
Cryptography/mTLS 6 years

### ***Wizdom Music — iPhone/iPad self-employment***

October 2010 - October 2012

A month after the iPad was released, I produced an app called Mugician which saw significant real-world use from well-known musicians (Underoath, Dream Theater, Gorillaz, The Flying Eyes, etc). I worked with other iOS developers on MIDI implementations to handle special problems that a continuous multi-touch surface allows.

Signal Processing 2 years  
C, C++, and Objective C 2 years  
iPhone development 2 years

### ***NFR Security / Check Point Software — Computer Programmer***

October 2004 - October 2015

NFR was one of the early IPS/IDS pioneers, with its ncode language for inspecting networks in real-time. Was on the team that built the Java desktop based user interface, The Alert Browser, and the JBoss based application server (highly altered J2EE), with a MySQL backend. Sentivist Alert Browser had excellent performance, handling a few million events per day per customer; with intuitive real-time visualizations of the alert stream.

Daily work included network-analysis, reading packet captures (ie: decoding HTTP, packet reassembly), automating network setup and firewall rules. Responsible for automating the build that checked out source

code and burned an ISO containing a windows client installer and linux installers after the build was gathered from the machines that did the compilation.

Built a WFC (a Windows C# UI framework) based debugger for the ncode language (rebranded as cicode); which involved the C# code invoking a cygwin built runtime for the C-based cicode engine. Also worked on the cicode engine (C based) as it was included in a Linux kernel module for the IPS functionality.

Worked on the Check Point ExtJS (Javascript front-end) web console to the server for about a half year. SensorNet - A project that was experimenting with Hadoop analysis -PageRank over the graph of nodes connecting to each other. Project MSSP - A web based log collector. It collected logs from customers's CheckPoint firewalls that were subscribed to this service.

C and C++ 4 years

ExtJS, PHP 2 years

Java 6 years

Python, Celery, Rabbit 2 years

Linux 10 years

Cryptography 8 years

## **ComTek**

October 1999 – October 2004

Worked on site at DISA and in Northrop Grumman (formerly Logicon), building out software deployments. I taught DISA employees about security cryptography (X509 certificates, hashes, DES ciphers, key handling, inverses). I mostly worked on an LDAP based system for user and attribute management. Built DoD PKI web sites against virtual databases for DISA.

Java 4 years

ColdFusion 4 years

Linux 2 years

SunOS 2 years

## **Federal Reserve**

1996-1999

Worked on banking surveillance applications. Generally, work was done in Power- builder (and occasional bits of Win32 C API). While there, I introduced the use of Java for these kinds of applications, and the first use of Java in production was by way of Silverstream.

Java 2 years  
PowerBuilder 2 years  
C/Win32 1 year

## EDUCATION

### **George Mason University, Fairfax, Virginia — Computer Science BS**

1993 - 1996

Computer Science degree. Focus on compilers, operating systems, discrete mathematics. C, Java, C++ programming. Compilers, and Operating Systems analysis. Computer graphics (before OpenGL libraries were available on Windows)

Java 2 years, since HotJava Alpha version

C 4 years

C++ 2 years

Linux 2 years