Carl Free

AI Engineer / Machine Learning Engineer

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Value Offered	
	• Well over 20 years heavy software development experience.
	• Many successful AI projects, even well before 2020's
	• Mastery of a wide variety of programming systems, especially the "difficult" ones, and especially ai and machine-learning.
	• Proven ability to solve the most unusual and difficult architecture and production problems, whether they involve application of machine learning, advanced algorithms, integration with old legacy code, or advanced mathematics.
	• Excellent public speaker, teacher, and technical leader.
	• See http://app.ironmedia.com/resume for downloadable examples of work.

Skill Summary	
	• Artificial Intelligence / Machine Learning: *EXPERT*
	• Java: *EXPERT*
	• J2EE / Spring: *STRONG*
	• Python: *EXPERT*
	• Tensor Flow and Pytorch: *STRONG*
	• Flutter/Dart: *MEDIUM*
	• Javascript/Node.js: *STRONG*
	• C++: *STRONG*
	• C# / .NET: *STRONG*
	• PHP: *EXPERT*
	• Go Language: *MEDIUM*
	• IBM Watson/BlueMix: *MEDIUM*
	• Blockchain / Smart Contracts: *MEDIUM*
	• LISPy Languages, esp. Clojure and Scheme: *MEDIUM*
	• Various flavors of assembly language: *MEDIUM*
	• Linux Platform: *STRONG*
	• Ability to quickly utilize new languages/systems/frameworks: *EXTRAORDINARY*

Experience	
	MAY 2024 – present; Upland Software; Dublin Ireland and Austin Texas
	Ai Engineer
	• Created "Ai Software Factory" -- a tool that starts with normal specification documents, and reliably produces well-tested super-maintainable correct software, even for large-ish projects.
	• Created "Virtual Employee" -- a software product that runs on a VM and controls browsers, desktop software, control panels, and anything else a human user can control, by operating a Remote Desktop (RDP) session.
	• Created "Ai Enterprise Software Generation" -- an Ai factory that translates human-written specification documents into finished and fully tested software, designed for medium to large-scale projects.
	JAN 2022 – MAY 2024; IBM; Ireland
	Senior AI Engineer
	• Created prototypes of ai-enhanced, new product offerings. Examples: RAG systems, screen-reading automation, Ai models that test other Ai models, etc.
	• Worked with Data Science researchers to create full-stack web apps, stand-alone desktop apps, and server-side APIs which demonstrate viability of new software products.
	DEC 2012 – JAN 2022; IBM; Florida and Ireland
	Senior Software Engineer

- Designed, implemented, and repaired high-performance custom software for many clients, such as Yum, Northrop Grumman, Lockheed Martin, and Shell Oil.
- Designed, wrote, and fixed web and mobile applications.
- Extended and maintained multi-million-line full-stack web apps.

NOV 2003 – DEC 2012; Outstart, Inc.; Lake Mary, Florida

Senior Technical Consultant

- Designed and implemented scalability solutions for training systems with thousands of simultaneous users, for both government and commercial organizations.
- Designed custom solutions for interoperability with popular software products and legacy systems.
- Wrote enterprise software that was sold to many Fortune 100 companies, as well as shrink-wrapped commercial software.
- Created monitoring and analysis tools for managing web applications with thousands of simultaneous users.
- Principle consultant to Australia's Department of Defense, worked at their facilities in Canberra to improve performance and stability of training systems.
- Chief consultant to US Navy. Led many engagements, resulting in solutions to many long-standing problems involving scalability and stability of training systems that serve many thousands of sailors.

JAN 2001 – NOV 2003; Convergys Corporation; Lake Mary, Florida

Developer/DBA & Senior Systems Analyst

- Wrote Java and C++ against large Parallel Oracle 8i databases (i.e. many terabytes, tens of millions of production transactions per day). Used JDBC, SQLJ, PRO*C/C++, and PL/SQL. Most of this programming was "database infrastructure", with much of the Java and PL/SQL running inside the Oracle database engines.
- Designed database and created software for an XML-based content management system for technical writers. Programmed the system with Enterprise JavaBeans, Java Server Pages, Java Servlets, and ColdFusion.
- Used formalized processes that included documenting designs and code -- often using UML and Rational Rose, and holding code reviews.
- Created solutions for many long-standing database and development problems.
- Helped technical writers to research, understand, and express complex technical systems.
- Taught several introductory database and Java classes to employees.

MAR 2000 - JAN 2001; Maxcess Telephone & Internet; Orlando, Florida

Senior Developer/DBA

- Wrote Java, C++, and Perl to support operations, including:
- A Trouble Ticket System with JSP and Enterprise Java Beans on an Oracle Application Server.
- A Purchase Order System with Servlets and JDBC.
- A Customer Service Interface on the Internet, with Perl CGI.
- A proxy server Java application, used to "spy" on troublesome database interaction.
- Wrote Oracle PL/SQL, and debugged PL/SQL in commercial database software.
- Helped other developers with difficult or time essential problems; helped other developers with advanced SQL programming & debugging.
- Designed and implemented Oracle, Sybase, and Informix databases on Solaris and NT.

JUN 2000 - FEB 2001; Training Solutions Group; Orlando, Florida

Oracle Instructor (Part-time Evenings and Weekends)

- Taught "Advanced Database Design with Oracle", which consists of relational theory, SQL, and PL/SQL. Students were usually computer technicians of various backgrounds who had successfully completed at least three prior database courses.
- Taught Oracle DBA certification exam preparation classes.
- Installed and configured all Oracle servers and clients.
- Handled negotiations with Oracle for software licensing.

SEP 1996 - MAR 2000; Coleman Research Corporation; Orlando, Florida

Database Developer / Administrator

- Wrote many HR-oriented web applications with Java Servlets, Java Applets, and JDBC.
- Designed databases and back-end systems, including:
- A Java application with JDBC and JavaBeans that synchronized a Sybase database with a VAX/VMS database. It read recent updates from Sybase, opened a telnet session to the VAX application, and entered the updates into user screens.

- A Java application with JDBC that reads a COBOL program's source code, creates a relational database with a similar structure, then copies the COBOL program's data into the relational database.
- A Perl CGI web-application security system.
- Several MS-Access applications, and programs that integrate with MS-Access.
- A custom application installer in Visual C++.
- A web application framework for Oracle.
- Taught several corporate computer classes -- both for end users and for fellow programmer/analysts.

JUN 1993 - JUL 1996; Lockheed Martin Electronics and Missiles; Orlando, Florida

Network Administrator / Programmer

- Wrote network & database oriented programs using Visual Basic, FoxPro and Clipper.
- Implemented & maintained file and print services for HR.
- Troubleshooter for any HR hardware or software problems.

MAY 1989 - JUN 1993; Lockheed Martin Electronics and Missiles; Orlando, Florida

Computer Technician

- PC repair duties and light programming.

1989 - 2015; Self Employed; Central Florida

Ballroom Dance Instructor

- Taught credit classes at University of Central Florida for 9 years
- Primary instructor for The Dance Club of Central Florida for 20 years.
- Contracted for many clubs and organizations.
- President of Dance Club of Central Florida during the year 2000.

1985 - JUN 1988; Chelsey Surplus Insurance; Orlando, Florida

Programmer

- Wrote various types of software such as:
- A program that dialed-up State of Florida systems to pull moving violation records.
- A front-end that integrated with TELEX to get quotes from insurance companies in London.

1983 - 1985; Forest Lake Academy; Forest City, Florida

Programming assistant

- Wrote various types of software such as:
- An artificial intelligence demonstration that carried an English conversation with a human being.
- A bar-code reading system later used by the school's cafeteria and library.
- Assisted students in the programming lab.
- Graded programming tests and projects.

Education	
	- B.S. Computer Science; University of Central Florida - Post-grad Comp-Sci studies w/emphasis on Artificial Intelligence; University of Central Florida - Oracle Database Administration; Diversified Computer Consultants, Orlando Florida - Sybase Database Administration; PowerCerv University, Orlando Florida
Citizenship	
	- USA Citizen - Currently employed in Ireland with a permanent work permit - Currently applying for Irish citizenship