

David Ferreira

Job Objective

Embedded Development Eng. / Machine Learning Eng.

Summary of Qualifications

- 17 years' experience as software developer / development engineer
- 24 years' overall experience in software development
- Certificate in C/C++ programming
- FCC-licensed amateur radio operator (K7NYY, Amateur Extra)
- US Patent ([No. US 9,912,064](#)) Segmented Convertible Radio Antenna
- Proficient in:
 - Embedded development (Linux, RTEMS)
 - NASA's cFS (core Flight System)
 - Econometric / Statistical analysis and forecasting
 - Machine Learning (models / methods)
 - R (statistical computation software)
 - Python programming
 - RapidMiner (data mining software)
 - C# / .Net programming
 - C/C++ (Windows & Linux)
 - Visual Studio .NET
 - TFS Build / Integration Mgmt.
 - Agile / Scrum methodologies
- Experience in:
 - Econometrics / forecasting
 - Internet of Things: Intel Edison and related toolchains
 - Linux / Embedded Linux programming (Renesas SH7757 chip)
 - Programming/Testing Mobile Applications (Windows Mobile / Phone)
 - Hardware Programming (TI MSP430)
 - Automation programming / architecting

Employment History

Sr. Software Development Eng.

Lockheed Martin Space, Littleton, CO

July 2022 – Present

- Embedded development, Orion Spacecraft
- Development of apps using NASA's cFS framework



Founder, Chief Engineer

Fourier Automation LLC, Cedar Park, TX

Feb. 2022 – Present

- Business development and formalization.
- Econometric & Machine Learning automation development
- Website development (.Net, MVC, Bootstrap)



Sr. Applications Engineer (contract)

Veterans Administration, Financial Service Center, Austin, TX

June 2016 – March 2022

- Primary owner of recent-legacy enterprise MVC web application.
- Primary and staff developer of several enterprise legacy ASP.Net forms applications.
- Managing big data coming in to applications requiring message to meet business rules.
- Implementing "508" (accessibility) features in existing ASP.NET apps.

Software Development Manager

3M Company, Austin, TX

Oct. 2013 – Dec. 2015

- Managing 2 development teams: EFMS and ScanNet
- Lead Dev. Eng. (**actively coding**) on ScanNet project and other projects.
- Leading C# and C/C++ development (Windows Forms)
- Implemented Agile/Scrum project model
- Implemented per work item peer code reviews
- Introduced analysis and reduction of technical debt
- Created complex custom TFS build definition for diffing files build

Sr. Software Development Engineer (contract)

Dell Inc., Round Rock, TX

May 2013 – Oct. 2013

- Contributing daily to a company-wide, mission-critical MVC web app.
- Extensive use of Entity Framework to create code-first linkages to SQL
- Heavy usage of Rhino-Mocks to create testable code.
- Creation of unit tests with an eye on code coverage %s

Sr. XNA Developer

Migration.mobi, Austin, TX

April, 2012 – March, 2013

- **Analysis and migration of mobile games** from IOS (iPhone/iPad) and Android to Windows Phone 7, Windows 8 and Windows 8 Phone – sometimes using MonoGame framework.
- **Silverlight UI Programming and Animation** of gaming elements.
- **Physics Modeling** (3D trigonometry, quaternions, matrix math, etc.)

Functional Test Engineer (Software Dev. in Test)

Dell Inc., Round Rock, TX

Sept. 2010 – April.2012

- **Dell "On the Spot" Award** for introducing "Bug Bash" practice at Dell.
- Took initiative to create multi-threaded, embedded Linux C/C++ test executable – uncovered system instability and defects.
- **Dell Silver Award** for invention and implementation of above tool.
- Took initiative to create embedded scripts – found memory leaks.
- **Dell "On the Spot" Award** for "exceptional contribution to scrum team".
- Owned and originated automation effort to validate feature licensing scheme of 12G PowerEdge server controllers (iDRACs).
- Created Python modules used by other teams to manage licensing.
- Inherited and augmented Python scripting to validate internal license tool.
- Contributed test cases, defects and critical thought to same area.
- Worked within Agile / Scrum project processes.

Software Development Engineer / Testing (Contract SDE/T level 2)

Microsoft Corp., Redmond, WA

Sept. 2008 – June 2010

- Windows Core and PQODE test teams.

- Took QA ownership of 2 shipping compression-related EXEs
- Wrote formal test plan for priority Windows 7 component
- Created stand-alone test application in C/C++ for both components
- Became go-to man for difficult test automation cases for offline Windows servicing in WTT. (Created, debugged and ran jobs in lab environment.)
- Created cryptographic applets to work around security hole in test infrastructure using C#.
- Developed plan to isolate / automate test execution from feature testing.
- Worked within Agile / Scrum project processes.

Retired (Private investor / Peace Corps volunteer)

Sept. 2003 – Sept. 2008

Software Development Engineer / Testing (SDE/T)

Microsoft Corp., Redmond, WA

May 1993 – Sept. 2003

- Worked as SDE/T on Microsoft's Digital Rights Mgmt. (DRM) solution.
- Responsibilities included:
 - Design / development of ATL COM objects in C/C++.
 - Writing Test Specifications.
 - Developing and implementing test cases.
 - Using software analysis tools such as BoundsChecker, CCover, PreFast
 - Logging and tracking bugs and other QA issues in Product Studio and RAID.
- Wrote test tools using MFC and Win32 libraries.
- Created test cases for MS Reader DRM on WindowsCE.
- Prior to February of 2000, worked as a software test engineer in the Office Core, MS Outlook (programmability), MS Project and Internal Tools groups.
- Extensive experience with C/C++, Visual Basic, CCover, BoundsChecker, VB for Apps., VB Script, MS Test.

Economist and Systems Manager

National Association of Printers and Lithographers (NAPL), Teaneck, NJ

January 1989 – May 1993

Systems Manager. Responsible for all of NAPL's computer operations and networks: Novell PC LAN, installation of Macintosh LocalTalk network, association management database operations, multi-network e-mail (cc:Mail).

Economist with NAPL's Printing Economic Research Center. Responsibilities included economic analysis and editorial work in NAPL's Business Indicator Report, Printing Sales Index Report and Printing Manager (NAPL's feature trade publication).

Education

West Texas A&M University, Canyon, TX

2020 – current

Masters of Science, Finance & Economics (in progress)

Univ. of Washington, Seattle, WA

1997 – 1998

Certificate in C++ programming.

New York University, New York, NY

1990 – 1991

Graduate classes in Economics

Stockton State College, Pomona, NJ

1982 – 1988

Bachelor of Arts in Economics

Certs. / Lics.

Certificate: C/C++ Programming, Univ. of WA (Ext.)

License: FCC Amateur Extra Radio Operator (K7NYY)

Certification: PADI Divemaster

Memberships:

Honor Society

Mensa

Volunteerism

Site Coordinator Volunteer (Cedar Park Farmers Market)

Keep Austin Fed, Austin, TX

July 2014 – Aug. 2015

- Recruit / manage volunteers
- Perform / Oversee collection of surplus food at close of market
- Perform / Oversee distribution of surplus food to food banks and shelters
- Requisition / Manage / distribute equipment

Peace Corps Volunteer (Small Business Development / IT)

Peace Corps / Perú (Lima, Perú)

Sept. 2004 – Feb. 2007

- Trained host country nationals in Internet development, HTML, VB and C++.
- Supported and trained other volunteers in Internet development.
- Evangelized beekeeping and other small-scale economic opportunities.
- Taught introductory English

Assistant Coach / Defensive Coordinator (Youth Ice Hockey)

Seattle Junior Hockey Assoc.

May. 1993 – Feb. 1999

- Trained youth at various levels in hockey, sportsmanship, personal achievement, and interpersonal relations

References

Available on Request