

# Peter A. Dunham

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## PROFESSIONAL EXPERIENCE

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**May 2014 – Present**                      **Senior Applications and Sales Engineer**                      **Aerotech, Pittsburgh, PA**

Solution design, business development, customer relations, and product marketing support to businesses in the semiconductor and test and inspection industries. Supporting applications that require specialized robotic systems.

- Managing all North and South American inspection/semiconductor customer accounts:  
~7M in orders, 13 field sales engineers.
- Acted as lead project manager on specialized capital equipment build for customer:  
~1M build, managed over 6+ months.
- Used C#, ASP.NET, MVC 5, Entity Framework 6, Microsoft SQL Server 2014 to develop a web-based application to improve efficiency and responsiveness for sales quoting activity.
- Provisioned a cloud server (DigitalOcean), Ubuntu 14.04 server, and initiated version control as a service through Git.
- Used R programming to clean historic sales and production data for exploratory data analysis and business insights.

**Technologies:** C#, Git, R, JavaScript, AJAX, JQuery, and JSON.

**August 2008 – May 2014**                      **Independent Engineering and Technology Consultant (1099)**

Grew consulting business to over a dozen clients by specializing in the automation of quality control testing in Washington DC Metro region, Pittsburgh, PA.

- Clients included: Acquired Data Solutions, Cal-Bay Solutions, Hughes Network Systems, Stantec, Current Technology Group, Integral Systems, and Lockheed Martin.

### Projects:

- Delivered an automated test station for critical multi-million dollar project for embedded computer systems.

**Technologies:** C, .NET, Git, MATLAB, TFTP, TestStand, SQL

- Created discrete event models that identified manufacturing setup to increase production capacity by 10% at overseas electronic subcontractor.

**Technologies:** Spreadsheet Optimization Model, Monte Carlo Simulation

- Translated R&D technologies to a production environment. Reduced bottleneck of manufacturing calibration process by creating and maintaining an automated calibration station; improved calibration process throughput by ~200X from manual process.

**Technologies:** Perl, LabVIEW, Windows Server 2003, SVN, C, .NET

- Conducted requirements analysis in order to optimize project plan; identified path with shortest lead time to production gains to release automated production on 9 unique telecommunication products.

**Technologies:** Python, LabVIEW, Perforce, C, .NET

## EDUCATION

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<b>Master of Business Administration (MBA)</b>	University of Pittsburgh	GPA: 3.9	<b>2014</b>
<b>Master of Science in Electrical Engineering (MSEE)</b>	University of Pittsburgh	GPA: 3.9	<b>2014</b>
<b>Bachelor of Science (BS): Integrated Science and Technology</b>	James Madison University	GPA: 3.3	<b>2004</b>

## TECHNICAL PROJECT EXPERIENCE

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### *Front End Web Quoting Application*

**November 2014 – Present**

Used C#, ASP.NET, MVC 5, Entity Framework 6, Microsoft SQL Server 2014 to develop a web-based application to improve efficiency and responsiveness for sales quoting activity.

- I initiated this project after building a business case that showed quoting time could be reduced by 50% with deployment of application. The savings from this improvement were ~\$80,000/month.
- Other technologies were leveraged to create a custom frontend including: JavaScript, AJAX, JQuery, and JSON.

Provisioned a cloud server (DigitalOcean), Ubuntu 14.04 server, and initiated version control as a service through Git.

### *Embedded LAMP Stack for Internet-of-Things (IoT) Asset Tracking*

**December 2012 – December 2013**

Cofounded technology venture working to enable businesses to wirelessly track their operations and assets using Bluetooth Low Energy (BLE).

- Led development of system, which utilized a LAMP stack on OpenWRT (embedded Linux OS).
- Acted as main presenter in interviews for funding with angel investors and business incubators.

### *SALCI: Sensor Array Light Controlled Instrument*

**December 2010 – January 2014**

Imagined, prototyped, and built a novel MIDI controller, hardware product, for musical performances.

- Built multiple iterations of a hardware prototype to realize a physical end-product.
- Wrote specifications for product and interface that enabled team members to create useful features.
- Led integration of embedded systems which included a network of Arduino Megas that communicated over I<sup>2</sup>C.

### *VLSI ALU Design & System Chip Design*

**2013**

- Created a small standard cell layout library with 90nm CMOS technology using Cadence Virtuoso.
- Simulated the system (SPICE/Spectre) to make design choices as system was scaled to operate as a 16-bit ALU.
- Created a transaction-level model of a network on a chip using the C++ framework SystemC.
- Implemented a non-trivial arithmetic expression in hardware using VHDL (Xilinx ISE Webpack).

## TECHNICAL PROFICIENCIES

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- Business Application Development: C#, ASP.NET, MVC 5, Entity Framework 6, Microsoft SQL Server 2014, JavaScript, AJAX, JQuery, and JSON
- OOP Design: C++, Java
- Version Control Use and Deployment as Service: Git, Subversion, Perforce
- Other Programming/Scripting Languages and IDEs: C/C++, Perl, Python, .NET, Visual Studio, Eclipse
- Portable Virtualization: VirtualBox (Windows, Linux/Ubuntu)
- Database Management: MySQL, MS Access, SQL Server
- Knowledge Sharing and Tracking Systems: Trac Configuration, SharePoint Development, Confluence, JIRA
- Media and Design: Arduino, Processing.Org, HTML/CSS, Adobe Photoshop, Logic Pro X
- Automation: LabVIEW Development, CLD: Certified LabVIEW Developer (2009-2013), NI TestStand

## INDEPENDENT COURSEWORK AND STUDY

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### *Data Science Specialization (Coursera: John Hopkins University)*

**In Progress**

- Writing R programs to gain statistical insights from large data sets.
- Using concepts and tools needed in a data science pipeline -- in order to make inferences and present business insights.