

# Timothy Overly

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## Experience:

### SPIDAWeb LLC

*Analysis Engineering and Software Development*  
Web Developer

**Gahanna, Ohio**

*August 2007 – Present*

- Designed and programmed multicomponent service-oriented web applications using the various frameworks and design patterns.
- Wrapped external web services into common interfaces for a modular designs.
- Diagnosed and tuned large datastores for sub-second response times.

### Desktop Developer

- Involved in all aspects of the development of the company's primary desktop application, including design, development and testing.
- Wrote a finite element analysis package, that accounted for geometrically non-linearity, catenary wires, pre-stressed components, temperature affects, to determine loading and stresses in utility pole structures.

### Development Manager

- Managed the team responsible for the development, maintenance and support of the company's software products.
- Served as the primary technical contact during the design process and external customer interactions.
- Implemented continuous integration testing, code review and feature development cycles to support a more robust development process.

### Los Alamos National Laboratory

*Engineering Institute*

### Graduate Research Assistant

**Los Alamos, New Mexico**

*May 2006 – July 2007*

- Designed, built and tested small electronic devices for use in structural health monitoring applications
- Programmed in MATLAB and C to control external hardware for data acquisition and analysis
- Developed a sensor diagnostic algorithm for use with piezoelectric sensor/actuators and implemented it in software

### TK Engineering

*Analysis Engineering*

### Engineering Apprentice

**Cincinnati, Ohio**

*August 2005 – April 2006*

- Constructed two and three dimensional finite element models of aircraft engine parts for modeling heat transfer, stress and life
- Automated boundary condition application through the programming of macros in ANSYS

### Los Alamos National Laboratory

*Dynamics Summer School*

### Engineering Intern

**Los Alamos, New Mexico**

*June 2005 – August 2005*

- Worked as part of a multidisciplinary team to implement an algorithm that used natural frequencies to detect damage in a structure

- Correlated test results to a theoretical model for plant identification and controller implementation

**Robert Bosch GmbH***Central Research and Development Center*

Praktikant

**Stuttgart, Germany***April 2001 – September 2001*

- Programmed a climate chamber measurement system using Visual Basic to improve data collection and decrease measurement time by eighty percent
- Developed a test protocol and programmed measurement systems to qualify new magnetic anti-lock brake sensors
- Designed and constructed fixtures for testing existing products within magnetic fields

**Enable Medical***Product Engineering*

Manufacturing, Research and Development Co-op

**Cincinnati, Ohio***June 1999 – August 2000*

- Designed and constructed prototype devices for use in treating heart disease that led to a device being taken to market
- Performed primary testing and qualification before product release for both endoscopic and open surgery devices

**Computer Skills:**

Languages	Frameworks	Databases	Build Systems	Test Systems	Continuous Integration		
Bash	EmberJS	MySQL	Ant	CircleCI	CircleCI		
C	Grails	MongoDB	Gradle	Jasmine	CodeCov		
Groovy	NodeJS	Oracle	Grunt	Jenkins	Jenkins		
JavaScript	ReactJS	PostgreSQL	Ivy	JUnit	Travis CI		
Java	Ruby on Rails	Redis	Maven	Mokito			
Ruby	Sinatra	SQL Server	Rake	Spock			
				Travis			
Other Syntaxes	Deployment Systems	Design Concepts	Operating Systems	Protocols	Version Control		
CSS	Google Cloud	Agile	Linux	REST	Subversion		
HTML	Heroku	IoC	OS X	SOAP	Git		
JSON	httpd	MVC	Windows	SSL			
LaTeX	Tomcat	Scrum					
Markdown		SOA					
SCSS							
XML							

**Education:****University of Cincinnati** *Department of Mechanical, Industrial and Nuclear Engineering***Masters of Science in Mechanical Engineering - 2007**

- Structural Dynamics
- Advanced Vibrations
- Finite Element Techniques

**University of Cincinnati** *Department of Mechanical, Industrial and Nuclear Engineering***Bachelor of Science in Mechanical Engineering - 2002**

- International Engineering Certificate

**Open Source:**

- [Resume](#) (author) the code that was used to generate this document

- [\*Truck Circuit\*](#) (author) an arduino project with matching circuit diagram for a halloween costume
- [\*SmartThings\*](#) (author) device handler to control a whole house fan
- [\*Bash Helpers\*](#) (author) series of scripts to make configuring a computer quick and consistent
- [\*SHM Tools\*](#) (contributor) a package of engineering tools used in structural health monitoring