Blake Jon Rego

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EDUCATION

Columbia University School of Engineering and Applied Science **New York, NY**
Bachelor of Science in Applied Physics, minor in Applied Mathematics *May 2008*

TECHNICAL SUMMARY

I have over 3 years experience architecting and implementing professional software applications. I am currently most proficient in .NET web and desktop applications using C# and iron python. I have demonstrated a strong command of object oriented programming design and implementation.

Languages: C#, Python (including Jython and IronPython), Java, HTML, Javascript, CSS, ANSI Common Lisp, C.
Libraries / Frameworks: MVC3 ASP.NET, ADO.NET Entity Framework, Bosch Rules Engine, jQuery, NUnit, Infragistics, Numpy, Mono

EXPERIENCE

Green Charge Networks **New York, NY**
Software Engineer Nov. 2011 - Present

Technologies Used: C#, Microsoft Visual Studio 2010 .NET 4.0, MVC3 ASP.NET, ADO.NET Entity Framework, Java, Bosch Rules Engine

- Created a web application that tied a registration database to a load-leveling battery system.
- Developed a decision aid system using the Bosch rules engine to help Con Edison operators choose among energy reduction devices.
- Currently developing a voltage contour map that will allow operators to visualize voltage data over an interactive web map using the CONREC contouring algorithm.

Advent Software – Tamale RMS **Boston, MA and New York, NY**
Software Engineer Aug. 2008 – Oct. 2011

Technologies Used: C#, Microsoft Visual Studio 2003 / 2008, .NET 2.0/3.0, Infragistics, NUnit, HTML, Javascript, CSS.

Responsible for the design, implementation and maintenance of the configurable workflow suite for our research management application.

- Principle design and implementation contributions for a template plug-in system for our deposit dialog and new entity modules. Used Model-View-Presenter (MVP) design patterns.
- Major contributions to the persistence mechanisms of configuration data via object serialization to XML.
- Implementation of features for Grid and Summary View modules.
- Wrote unit tests using NUnit.

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Home LED Software Light Interface
Personal Project

Technologies Used: Python, Numpy, Alsaaudio, Mono, C#, Microsoft Visual Studio 2008, .NET 3.0

- Wrote code to control Color Kinetics lights light arrays over Ethernet using a Phillips PDS-150 power supply. Eight of these light arrays are set up to decoratively illuminate my living room.
- Audio Controlled Light show - Using Numpy and Alsaaudio modules, wrote scripts in Python to perform an FFT on .wav files and dynamically change the colors of the lights in the room.
- Light Controller Desktop Application – Using C#, I've created a desktop application that allows me to control the state of each of these light arrays via a graphical user interface. Some of the features I've implemented include: saving colors, loading colors, dimming, color fades, pulses, "snake," copy light state, paste light state.

University of Pennsylvania - Center for Molecular Modeling- Physics Dept **Philadelphia, PA**
Undergraduate Researcher Jun. 2007 – Aug. 2007

Technologies Used: GROMACS, tcl, bash

- Worked on a computational physics problem utilizing molecular dynamic (MD) simulations on the interaction between single walled carbon nanotubes and various biological proteins.
- Coded scripts primarily in a Linux environment using bash and tcl.
- Wrote a technical research paper summarizing my findings.

PUBLICATIONS

Computational Study of a Nano-Biosensor: A Single-Wall Carbon Nanotube Functionalized with the Coxsackie-Adenovirus Receptor. *(Collaborating Author)*
Journal of Physical Chemistry B. Published 27 Aug 2009.

Precise positioning of carbon nanotubes by ac dielectrophoresis. *(Collaborating Author)*
Journal of Vacuum Science and Technology B. Published 4 Dec 2006.