Blake Jon Rego

203 Rivington St., Apt. 4k, New York, NY 10002
786.554.9821 | blake.rego@gmail.com
www.blakerego.com

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 applications using C# and iron python. 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.

EXPERIENCE

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

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. Model-View-Presenter (MVP) design patterns were used.
    - Major contributions to the persistence mechanisms of configuration data via object serialization to XML.
    - Principle contributions to the user interface.
    - Minor contributions to the implementation of features for Grid and Summary View modules.
    - Wrote unit tests using NUnit.

- Periodic "Fire Marshall" rotations.
    - On call to field technical questions in order to aid client services deal with bugs that occur in the field.
    - Troubleshoot issues on the user's workstation under client pressure.
    - Deliver immediate solutions in the form of either a code patch or work-around instructions.
    - Propose long-term solutions to the development team.

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 set the colors 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

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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.