

## CHARLES SAM DANIEL

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### SUMMARY

Skilled Software Engineer with several years of experience in various languages, web technologies, network server development and robotics.

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### SKILL SET

Proficient in:

- Perl, Python, bash scripting, gmake, C/C++, Javascript, HTML
- TCP/IP Client/Server development (including web server development)
- Apache, mod\_perl2, CGI, HTTP, SMTP, DHTML, AJAX, CSS, JSON, SQL
- Linux, Mac OS X, UNIX

Experienced in:

- Panda3D, Autonomous Robotics, OpenGL, Raytracing, Inverse Kinematics
- Objective-C, Java, PHP
- Maya, Blender3D, Gimp, Inkscape, Final Cut Pro, Motion, DVD Studio

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### EDUCATION

**Master of Entertainment Technology** – Carnegie Mellon University

**Master of Science in Computer Science** – Penn State University

**Bachelor of Science in Computer Science** – Penn State University

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### PROFESSIONAL EXPERIENCE

**5/2007 – 8/2008**

**Software Engineer**

Principia Partners LLC

- Designed and developed a clustered client/server software for the nightly regression testing and reporting of the company's flagship product.
- Reworked and developed the company's public facing case management website.
- Developed Perl modules to integrate the case management system with Salesforce as the database backend.

**5/1999 – 5/2007**

**Senior Software Engineer**

Webclients.net/Valueclick.com

- Designed and developed several custom written multi-threaded C++ based Application Servers for middle tier database integration, payout/billing statistics analysis and streamlining of public facing web based systems.
- Designed and developed a Perl/Javascript pipeline framework for the automatic creation, rotation and feed of lead collecting web advertisements placed on over 200 Webclients web properties.
- Developed Perl modules for various tasks including: United States Postal Service address parsing and verification, web CGI parameter scrambling, mass emailing and credit card encryption.

**1/1996 – 8/1998**

**Computer Technician**

Penn State University

- Repaired and maintained Penn State University computer lab equipment as well as faculty computers and laptops.
- Helped novice computer users with hardware and software issues.

## PROJECTS

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### **1/2010 – 5/2010      Motion Control Time Lapse Robot Camera Rig**

<http://www.etc.cmu.edu/projects/camera/>

- Helped design and build an eight foot tall robotic arm with five degrees of freedom (including a dolly locomotion on a track).
- Developed all the software including the robotic control and the user interface for programming animated motions of the robot arm as well as integrating with a Canon 4D DSLR camera to take high quality images.

### **8/2009 – 12/2009      Bat-teK (Lockheed Martin Robot Recon Project)**

<http://www.etc.cmu.edu/projects/gadget/>

- Integrated various disparate technologies into a single collaborative environment for the purpose of reconnaissance gathering. These technologies included camera-equipped robotic rovers, a camera-equipped robotic blimp, webcams, iPhones and a Microsoft Surface table.
- Developed iPhone software to remotely control the robot rovers and blimp while streaming their video feeds to the display.
- Developed the multi-touch node based interface for the arbitrary pipelining and integrating of gathered data, including video feeds, sonar data and GPS, on the Microsoft Surface table.

### **1/2009 – 5/2009      GirlTech – Robotic Painter (Pittsburgh Children's Museum)**

<http://www.etc.cmu.edu/projects/girl-tech/>

- Developed software to control a small robotic arm which can use real paint to replicate a child's drawing input from a touchscreen.
- Taught high school girls basic programming and helped them develop a tic-tac-toe playing robot arm.