

Cover Letter

Resume Cover Letter
<http://estss.com/NickShin/INFO/resume.php>

Nickey C. Shin
(Due to the high profile projects I have worked on, I have taken my home address and phone number off these pages.)

Thank you for taking the time to read this.

First, a little bit about myself before going into the type of work I am interested in.

I have a passion for electronics. It is exciting how a box of wires and chips put together can bring so much joy to the people using them. Most of the projects I have worked on reflects my enthusiasm and interest in electronics and computers.

As you read through my resume, you will see that I am experienced in many different skills and the work years to go with it. I like to have fun with what I am working on. But I also like to see what today's technologies can be pushed to.

Now, the kinds of **work I AM** looking for: Fun projects and mentoring.

Embedded systems and **real time (video gaming)** are my field of expertise. I am interested from starting at the research and development phase; learning the new technology that challenge my skills; to implementing them. Projects requiring **data acquisition** (real world data input - manually or automatically), data display (**GUI**) and data communications (**networking** or other methods) are my primary interests.

Ever since **HTML5 and WebGL** have been available - this has become my main focus powering all of my projects currently. I continue to write server-side generated page scripts (**NodeJS**, PHP, C/fast-cgi, etc.) and client-side created pages (primarily with JavaScript and the myriad of frameworks available for it).

I have also designed, setup and brought online - small and medium sized automated **high availability** systems. Although these are now provided by a number of service providers (such AWS, GCE, Rackspace, etc.) - I still make some on-site for internal and proprietary needs.

For more details on what I used day to day, please take a look at my **sample code** and my 'cheatsheet' notes I have made available to the public at:

<http://estss.com/opensource/cheatsheet.php>

The following is primarily for cold calling recruiters. Offers I am **NOT** looking for:

- Supporting old, dying or dead tech
- I do not want a (tech) documentation writing offer. I will only write documentation on projects that I have been involved with from the beginning.
- Do not call me if the job is for a tech support monkey position, a lab (maintenance) baby sitter or a tester position (where the fun work has already been completed).
- But, if there are needs for solutions in designing the lab infrastructure or there are needs for designing new testing applications, then I "might" consider the offer.

Do **NOT** contact me about joining your resume search engine either. All of those requests will be ignored.

Please **DO** include a description of the offer when you contact me about your inquiry. Offers that are not specific will result in longer reply delays.

Thank you again for taking the time to read this letter.
Have a Nice Day!

[Nick Shin - nshin@estss.com](mailto:nshin@estss.com)

Contact Information

< available upon request >

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Latest and most up to date resume/CV can be found at:
<http://estss.com/NickShin/INFO/resume.php>

nshin@estss.com -- Please contact me via e-mail.
You will have a better chance of reaching me and then setting up a day and time for a phone call.

Employment Objective

To bring my deep experience in computer programming from the creative and imaginative field of the video gaming industry to new challenging projects and opportunities. Along with my electrical engineering hardware skills, brings extensive physics, mathematic and logic problem solving skills. Yet, am business conscience by keeping an eye on the company's needs, by being analytical, methodical and highly organized.

Work Experience

For more information about the places I have worked at, please see:

<https://www.linkedin.com/in/nickshin/>.

I have written sample code made available to the public, please see:

<http://estss.com/opensource/cheatsheet.php>.

Phosphor Games

- Sept 2015 - Current - **Principal Software Engineer**
 - Platform Developer for Epic Games: Unreal Engine 4.10 - 4.16
 - HTML5 platform
 - emscripten SDK (web assembly and WebGL2)
 - maintain 3rd party libs: zlib, openssl, libcurl, libwebsockets, webRTC
 - Jan 2015 - Jan 2016 - **Senior Software Engineer**
 - Gemini: Heroes Reborn console and PC game play and system stability
 - Unreal Engine 4.9
 - Playstation4 submission (technical requirement checklist)
 - Programming Tools and Skills used:
 - Visual Studio 2010 2012 2013 2015
 - Unreal Engine 4.9 - 4.14
 - Codebase using C++11 features
 - Playstation4 SDK 2 & 3
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WMS Industries, Inc. (now [acquired](#) by Scientific Games)

Advanced Research and Development

- Apr 2014 - Jan 2015 - **Principal Software Engineer**
 - BetCloud - [next generation](#)
 - Integrating new technologies of product and engineering into the (casino) gaming industry.
 - Looking into technologies such as:
 - Docker, AWS, Jenkins, etc.
 - LLVM, WebGL/OpenGL
 - Grunt, Bower, Yeoman, swagger-api
- Nov 2012 - Mar 2014 - **Principal Software Engineer**
 - BetCloud
 - Developed and brought to market (trial-capacity) the mobile tablet gaming project.
 - See the trial [BetCloud flyer here](#) (note: trial period has ended)
 - Programming Tools and Skills used:
 - Worked on a mix of operating systems including Windows and Linux
 - Mix of C, C++, Perl, Python, PHP, HTML, Javascript, Java, TypeScript
 - Build environments: (Bash) shell and perl scripting, Maven (java)
 - leverage as much off-the-self opensource libraries and projects including:
 - Apache
 - git
 - Node.js
 - RabbitMQ (AMQP)

- Nov 2010 - Oct 2012 - **Senior Software Engineer**
 - Mobile Gaming proto-type
 - Spearheaded HTML5 tablet gaming proto-type
 - Shown at Global Gaming Expo (G2E) 2012 at an invite-only concentrated focus-group presentation.
 - Programming Tools and Skills used:
 - See BetCloud list above
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Your Neighborhood Network

Digital Signage Systems Architect

- Sept, Dec 2009, Jun, Aug, Oct, Nov 2010 - **Principal System Architect** (independent contractor)
 - Design and deliver automated and high availability systems based on an existing digital signage network with minimal to no interruptions on current operations.
 - Programming Tools and Skills used:
 - Deployed on a mix of operating systems including Windows and Linux
 - Mix of C, C++, Perl, Python, PHP, HTML, Javascript
 - leveraging off the self opensource libraries
 - combination of binary executables and scripts
 - GCC (C) and G++ (C++) compilers with Makefile project management
 - bash shell environment
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Luxoflux Studio

Video Game Programmer

- Sept 2008 to May 2009 - **Networking and Gameplay Engineer** for the **Transformers 2: Rise of the Fallen** project (full time position)
 - This project was developed for the Xbox360 and Playstation3 platform.
 - System work included:
 - integrating Xbox Live connectivity to multiplayer gamemode: invites, friends, join in progress and host migration.
 - integrating Playstation Network restrictions: parental controls and voice/chat settings.
 - network communications on both platforms: VoIP, packet/message crafting and out of order message handling.
 - Gameplay work included:
 - network stability: during host migration and join in progress players.
 - program design requirements for art assets to be "team" dependent.
 - Programming Tools and Skills used:
 - Visual Studio 2008
 - Perforce
 - 100% C++ project
 - STL programming
 - Object Oriented programming
 - DirectX (xbox360)
 - Sony Playstaion Library (PS3)
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Radiant Vue (now called Your Neighborhood Network)

Digital Signage Systems Architect

- Aug 2007 - May 2008 - **Principal Systems Architect** (independent contractor)
 - A networked system to deliver and track ad content to remote embedded display devices for the digital signage industry.
 - Programming Tools and Skills used:
 - LAMP stack server: Linux Apache MySQL and PHP
 - video playback client: Linux and Gecko based web browser
 - Mix of C, C++, Perl, Python, PHP, HTML, Javascript
 - leveraging off the self opensource libraries
 - combination of binary executables and scripts
 - GCC (C) and G++ (C++) compilers with Makefile project management
 - bash shell environment

White Rabbit Games Studios (now [acquired](#) by TouchTunes Music Corporation)

Video Game Systems Engineer

- *Summer/Fall 2007* - **Senior Systems Engineer** (independent contractor)
 - Developed the diagnostic UI and reporting (audit) system used on the [PlayPorTT](#).
 - Programming Tools and Skills used:
 - Linux based system
 - Mix of C++, Perl, AWK, SED and shell scripts
 - G++ (C++) compilers with Makefile project management
 - bash shell environment
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Midway Games

Video Game Programmer

- *Jan 2007 to Oct 2007* - **Senior Systems Engineer** for the **Mortal Kombat vs DC Universe** project (full time position)
 - First project on the Xbox 360 and Playstation 3 platform.
 - This project used the Unreal Engine 3 from Epic Games. Experience includes:
 - learning the Unreal Engine project structure and how the architecture can be used/extended
 - configuring/using/adding features to the "editor"
 - creating/using "commandlets"
 - ported old sound API the team is familiar with to work on top of the Unreal Engine
 - Programming Tools and Skills used:
 - Visual Studio 2005
 - Perforce
 - 80% C++ project
 - 20% Unreal Scripting
 - Object Oriented programming and scripting
 - Unreal Engine 3
 - DirectX (xbox360)
 - Sony Playstaion Library (PS3)
- *Jan 2005 to Dec 2006* - **Senior/Lead Engineer** for the **Mortal Kombat: Armageddon** project (full time position)
 - Project Leader on MOTOR Kombat, another "mini-game" mode. This was done full time for the duration of the whole project.
 - Tasks included:
 - complete mode from the ground up - from an engine that was derived from a "fighting-mode" game system
 - custom collision mechanism for efficient and optimization needs
 - split screen mode (allowing up to 4 players on a single "offline" game)
 - multi-player mode for up to 8 players online
 - networking code (traffic shaping, message optimization and priority levels) to fit within restricted resources available/allowed
 - and was pretty much the only one programming this mode... =)
 - Programming Tools and Skills used:
 - Visual Studio .NET (2003)
 - Perforce
 - 90% C project
 - 5% custom MK Scripting
 - 5% C++ - Art Tool application
 - DirectX (xbox360)
 - Sony Playstaion Library (PS3)
- *Jan 2003 to Dec 2004* - **Senior Systems and Gameplay Engineer** for the **Mortal Kombat: Deception** project (full time position)
 - Project Leader on the mini-game mode: Puzzle Kombat. Tasks included:
 - game play mechanics
 - puzzle engine
 - networking code
 - optimizations
 - Other tasks included coding support for the main fighting game mode:
 - all "fatalities" and "hara kiri" routines
 - Dark Prison background -- this arena was unique where non-player characters (NPC) interact with the 2 fighting players on an engine not designed for this kind of interaction.
 - particle effects
 - core system and particle system optimizations

Nick Shin's Resume

- Programming Tools and Skills used:
 - Visual Studio .NET (2002)
 - Perforce
 - 60% C project
 - 40% custom MK Scripting
 - DirectX (xbox360)
 - Sony Playstaion Library (PS3)

 - July 2001 to Dec 2002 - **Systems and Gamplay Engineer** for the **Mortal Kombat: Deadly Alliance** project (full time position)
 - On this particular project, this was the only team in the company that developed a game on all the three target platforms simultaneously (i.e. not outsourced). So I have become very familiar with the inner workings of:
 - Playstation2
 - Xbox
 - GameCube
 - Wrote the shadow and reflection system for the "player characters". Special effects: including particle effects and "fatality" mechanism and functions.
 - Wrote a new display processing and lighting control system for the game engine.
 - Configured PC machines for running linux in order to process SDK files and vendor provided tools for quicker development solutions.

 - Programming Tools and Skills used:
 - Visual Studio 6.0
 - Source Safe
 - 100% C project
 - DirectX (xbox360)
 - Sony Playstaion Library (PS3)

 - Jan 2001 to June 2001 - **Systems Engineer** for the **Touchmaster** (full time position)
 - Worked on the Touchmaster product line. A touchscreen table top video game machine. This continued until the end of the product's life when the company moved off of coin-op games and into the home console markets.
 - Wrote a new display system that is truly platform independent. So the project is not doomed to obsolete products.
 - Device driver work on legacy systems.
 - Rewrote the build environment for higher reliability and easy maintenance.
 - Operating systems used in this project were Linux and FreeBSD.

 - Programming Tools and Skills used:
 - BSD based system (original system)
 - Linux based system (new system)
 - Mix of C++, Perl, AWK, SED and shell scripts
 - leveraging off the self opensource libraries
 - combination of binary executables and scripts
 - GCC (C) compilers with Makefile project management
 - bash shell environment
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Motorola

High Availability Platform (HAP) Development

- May 1998 to Dec 2000 - **Software Engineer** (full time position)
 - Assignments included developing the new generation of network and communication systems for the telephony industry.
 - Writing device drivers on new proprietary hardware with real time operating systems (RTOS) on Motorola's PowerPC boards running WindRiver's VxWorks, Lynx's LynxOS, and Sun's ChorusOS
 - Other assignments involved creating a new development environment for our developers to use (over 200 people locally and another 100 at remote sites). The development environment will then be deployed to our (internal) customers for developing/providing new commercial products.
 - Designed the network infrastructure for the developer's environment (which includes providing a secure method of holding third party licensed source codes).
 - Provided solutions to help create a training session for teaching the developers about the RTOS in use.
 - Provided solutions in the developer's environment for integrating with 6 different internal Motorola groups.
 - Designed and held training session for the developers by presenting and teaching new procedures and technologies.
 - Working on developing new applications for the Sun Solaris workstation and servers that will access and control the new HAP product.

 - Programming Tools and Skills used:
 - Visual Studio 4
 - Clearcase
 - Mix of C, Perl, HTML, Javascript

Digital Equipment Corporation

Text-To-Speech Research and Development

(College)

- *January 1997 to December 1997 - Software Engineer* (45+ hours per week - internship)
 - Assigned to the development of the DECTalk product lines.
 - Assisted in final release production quality control, build processes, and implementation of new features, tool development for automation in tuning and regression testing for both of the hardware and software products.
 - Was responsible as the primary product trouble shooter (debugging) engineer.
 - Wrote new programs that featured the abilities of the product (Windows applications in Visual C++).
 - Programming Tools and Skills used:
 - Visual Studio 4
 - Sourcesafe
 - 100% C
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University of Illinois, Computing Services Office

Engineering Workstation System Labs

(College)

- *Spring 1996 to Fall 1996 - Site Manager* (30+ hours per week - part time position)
 - In addition to the Lab Assistant's responsibility, site managers are also responsible for the maintenance of the labs themselves and responsible for checking on attendance and the performance of the lab assistants working in the lab.
 - Held performance reviews and provided suggestions and reports on improving the lab's ability and usability for the engineer's needs.
 - *Fall 1994 to Spring 1996 - Lab Assistant* (20+ hours per week - part time position)
 - Assisting users with the software and hardware supported by the College of Engineering Workstation computer systems.
 - Responsible for maintaining and trouble-shooting these systems which covered six labs and about 200 networked UNIX workstations, including Sun SPARCstation 2/10/20, IBM RS6000, and HP/Apollo HP-UX models 700 and 715.i
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Jaleco USA

Product Development, Research and Design

(High School)

- *August 1990 to May 1994 - Consultant* (10 - 35+ hours per week)
 - Assisted in product development and end product quality assurance by providing feedback and testing the programs before releasing it for marketing.
 - Testing covered consumer and commercial sector products that were produced in the industry of electronic gaming entertainment. Specifically, gaming cartridges for the Nintendo machines for the consumer market and full size uprights and sit-in arcade machine for the coin-op market.
 - Also assisted in electronic shows and exhibits (Consumer Electronic Show) as a public relations liaison by showing product demonstrations and providing technical information to interested parties.
 - *Summer 1994 - Warehouse Manager* (10 - 35+ hours per week)
 - *August 1990 to May 1992 - Warehouse Assistant* (10 - 35+ hours per week)
 - Ran full warehouse shipping and receiving operations for Jaleco consumer and commercial products. Also assisted the coin-op technician in trouble shooting and rebuilding coin-op products.
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Education

University of Illinois at Champaign-Urbana

Received Bachelor of Science in **Electrical Engineering** in May 1998.

And Bachelor of Science in **Computer Science** in May 1998.

Nick Shin's Resume

Relevant Coursework

◦ **Electrical Engineering** (Major)

Introduction to Computer Engineering/Architecture
Computer Engineering/Architecture II
Introduction to Circuit Analysis
Introduction to Electromagnetic Fields
Electrical Engineering Laboratory I
Signal and System Analysis
Solid State Electronic Devices
Digital Systems Laboratory
Electronic Circuits
Electronic Circuits Laboratory
Lines, Fields, and Waves
Advanced Digital Projects Laboratory
Microcomputer Laboratory
Probabilistic Methods of Signal and System Analysis
Theory And Fabrication of Integrated Circuit Devices
Computer Organization and Design
Large Scale Integrated Circuit Design
Engineering Problems -- Advanced Digital Systems Laboratory
Senior Design Project Laboratory
Future Car Project

◦ **Computer Science** (Minor)

Calculus and Analytic Geometry II -- using Mathematica
Calculus of Several Variables -- using Mathematica
Differential Equations and Orthogonal Functions -- using Mathematica
Linear Transformations and Matrices
Introduction to Computer Science
Discrete Mathematical Structures
Programming Laboratory Fortran
Software Laboratory C++
Data Structures and Software Principles -- using C++
Computer Networking

◦ **Business Administration** (Extracurricular)

Speech Communications I
Speech Communications II
Management and Organizational Behavior
The Legal Environment of Business

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