

**SHANNON PROGRAMMER**

4050 Applegate Drive ■ Duluth, MN 55806  
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**Career Objective:** Analytical, strategic thinker and Network Administrator with advanced computer expertise and creative, versatile programming skills, seeking to secure a challenging position in Software Development.

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**E** DUCATION

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**Master of Science, Computer Science** – University of Minnesota, Duluth, MN, UMD April 2010  
GPA: 3.8/4.0

**Thesis:** Collected color spectrum data used to model human perception under adverse weather conditions. Designed and developed an innovative model using adaptive filters and pattern recognition techniques. Designed several specialized computer systems used in simulation. Obtained funding from the Minnesota Department of Transportation to support research.

**Bachelor of Science, Cum Laude, Computer Science** – Capital College, Crystal, IA May 2008  
GPA: 3.74/4.0

**Advanced Coursework:** Advanced Computational Logic ➤ Advanced Computer Graphics ➤ Systems Programming ➤ Software Engineering ➤ Advanced Graph Theory ➤ Advanced Computer Architecture ➤ Computer Networks ➤ Database Systems Management ➤ Digital Signal Processing ➤ Artificial Neural Networks

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**C** OMPUTER EXPERTISE

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**Systems:** UNIX, Solaris, Linux, Windows, Mac, DOS  
**Languages:** C, C++, Java 2, JavaScript, XML, HTML, UML, Perl, Assembly, Visual Basic, FORTRAN, Python, Lisp, Pascal, COBOL  
**Software:** SRGP, Tivoli, Secureway Policy Director, Lotus Notes, Macromedia Dreamweaver, Adobe Photoshop, MS Office Suite, Expat parser toolkit, Final Cut Pro  
**Database Tools:** SQL, MS Access  
**Other:** SNMP, TCP/IP, MPI, Multiprecision packages, XML, Flash, LaTeX

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**P** ROFESSIONAL EXPERIENCE

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**Teaching Assistant**, Department of Computer Science – UMD Sept. 2008–Present

- ⊕ Design and prepare creative course learning material for undergraduate courses: Computer Science I, Introduction to C, Introduction to C++, Data Structures, and Software Development
- ⊕ Prepare and evaluate homework assignments and laboratory projects in alignment with benchmarks
- ⊕ Conduct recitation sessions and laboratory practice to assist students in improving academic performance

**Technology Security Systems Intern**, Cloverville National Labs – Cloverville, AZ

Jun. 2008–Aug. 2008

- ⊕ Engineered a virtual network required to efficiently execute assigned tasks using VMWare software
- ⊕ Identified potential weaknesses in configuration process of Cisco VPN client for remote access to Intranet
- ⊕ Performed similar analysis of Zone Alarm personal firewall used to protect system
- ⊕ Recommended strategic actions implemented to minimize the potential of compromise through VPN exploit
- ⊕ Developed evidence of concept tools used to demonstrate discovered exploits, and presented to department

**Network Administrator**, Village Green Townhomes – Duluth, MN

Aug. 2008–Present

- ⊕ Efficiently monitor, maintain, and update computer systems to meet user needs
- ⊕ Provide technical support for over 500 residents
- ⊕ Troubleshoot network related and other general computer issues
- ⊕ Installed and configured current TCP/IP system, including DNS, DHCP, NAT firewall, routing, and hardware
- ⊕ Regularly develop, maintain, and update website to promote the facility and inform residents of community events

**Math Tutor**, Department of Mathematics, Capital College – Crystal, IA

Sept. 2006–May 2008

- ⊕ Assisted students with understanding and solving math problems of college level math courses including Calculus I and II in a campus wide drop-in tutoring center
- ⊕ Leveraged creative and methodical study strategies to help students improve academic performance, which resulted in 30% improved grades in Calculus I and 25% improved grades in Calculus II

**RELEVANT PROJECTS**

**Blood Circulation Simulator:** Developed software, as part of a team, to simulate the blood circulation system, allowing students to adjust parameters affecting blood flow. Used Java under Linux, Java Swing for GUI, and JDBC for database connectivity, MySql.

**Artificial Neural Network Simulator:** Experimented with and taught a neural network to predict boiling points for 275 chemical liquid compounds using PlaNet.

**Automobile Troubleshooter:** Created a dynamic expert system to perform automobile troubleshooting using Java Expert System Shell.

**Emulation of Resource Broker in Globus:** Emulated the resource broker in Globus, Grid-enables operating system. Parsed RSL scripts and allocated the requested resources in the Globus network.

**Holiday Travel Package Management System:** Implemented a system to store, manipulate, and generate reports of client data for a local travel agency.

— Excellent References & Portfolio available upon request —