

Luke Clemens

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<http://clemens.bytehammer.com>

EDUCATION

- Bachelors Degree in Computer Science, Montana State University Bozeman, May 2002
- High School Diploma, Bozeman High School, June 1996

COMPUTER SKILLS

- *Operating systems:* DOS, Windows 3.1 through XP, Unix/Red Hat, and Macintosh System 7 through 9
- *Languages:* C++/MFC, PHP, JavaScript, Perl-CGI, Java, Ada95, Motorola Assembly
- *APIs, SDKs:* MFC, ActiveX/COM, ATL, WNet, MIL 7.5 image processing library
- *Query Languages:* Access/DAO, MSQL, MySQL
- *Electronics:* Basic experience with both digital and analog circuitry, and workstation assembly/architecture
- *Protocols:* Programmed communication modules for devices operating via RS-232, TWAIN, LVDS, Ethernet/TCP, MIDI, and X10
- *Related Skills:* Professional graphic design, excellent technical writing/documentation abilities, product development cycle knowledge

RESEARCH AND PROJECTS

- Robotics, Computer Vision, Image Processing, Artificial Intelligence, Voice Synthesis/Recognition
- Neural Network Algorithms - Bayesian Classifiers, Back Propagation, Competitive Weights, Self Organizing Maps, Learning Vector Quantization
- Quantum computing and general quantum physics concepts
- Chaos fractal algorithms
- MFC/Windows API user interface programming
- Raytracing and simulation - Raytracer engine design and implementation

EXTRACURRICULAR ACTIVITIES

- Volunteer web designer and coordinator for www.mtusatf.org
- Weightlifting, running, hiking, mountain biking, rock-climbing, etc.
- NMSU Rugby Team 2001-2004
- MSU Track and Field Team 1997-1999
- Bozeman High School track and field 1992-1996

WORK HISTORY

2001-Current. Software Engineer, [Southwestern Cotton Ginning Research Laboratory](#) (Las Cruces, NM)
Programmed a Windows 2000 interface and image processing framework using Visual Studio 6 with MFC/C++, which functions as the front end for a machine vision system that analyzes a video stream of cotton during the process of ginning. Data is gathered from the captured images and supplied to a trained backward propagating neural network, which makes a conclusion based on amount of trash in the cotton to determine the next stage to carry out in the ginning process. The image processing library used is Mil 7.0 by Matrox Imaging. (See <http://clemens.bytehammer.com/papers/CottonEye/> for project specifications.)

2001-Fall 2001. Software Engineer, [Fuzz Technologies](#) (Bozeman, MT)
PHP and MySQL were combined to create an advanced web-based graphical interface for customer service representatives. The use of regular expressions to parse web pages for pertinent information was a major focus of the operation.

2000-2001. CO-Founder/President and Web Developer, [ByteHammer Media](#). (Bozeman, MT)
Activities included: money management, customer relations, advertising, web-site design and planning, e-commerce system development, and programming. Working with graphic editors and writing code in various web languages were part of the day-to-day workload.

1999. Lab Technician, [Burns Telecommunications Center](#). (Bozeman, MT)
Responsibilities included keeping the lab's computers and network running smoothly and assisting customers with projects such as slide scanning/printing, laser printing, poster printing, CD-ROM front-end creation, video editing, web-development, and electronic visual presentations. The most common applications employed were PhotoShop/ImageReady, Dreaweaver, PowerPoint, and Director. The various operating systems in use were Windows 98, NT4, Mac OS 8 through 10, and FreeBSD. Instructed individuals and small groups of users in multimedia presentation and creation techniques.

1999. Part-time Web Master, [EHHD Dept. at Montana State University](#). (Bozeman, MT)
Implemented a web-based message board for local student teachers. Tutored staff members concerning web-development and maintenance procedures.