

Marvin L. Smith

CONTACT INFORMATION

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WORK EXPERIENCE

Software Engineer, ISR Group

Sierra Nevada Corporation, Sparks, NV
January 2012 - Present

- Assisting on the software development and hardware integration teams for the Gorgon Stare Wide Area Surveillance Program.
- Particular tasks involve image processing, OS security compliance, some networking

Intern, Intelligent Robotics Group, NASA Ames Research Center, Mountain View, CA

- June 2011 - August 2011
Developed a crater detection algorithm for use in planetary surface characterization and terrain reconstruction. Primary use is for the alignment of LIDAR data from the LRO Satellite to images taken from the Apollo 15 and 17 missions.
- June 2010 - August 2010
Developed algorithms for the open-source NASA Vision Workbench library which removes outliers from stereo reconstructions of the lunar surface.

Staff Sergeant, Nevada Air National Guard,

Guidance and Control Shop, Avionics Flight, 152 MXS, Nevada Air National Guard
August 2006 - Present

- Instrumentation and Flight Controls Journeyman (2A553B).
- Maintenance and repair of USAF C-130 Guidance and Control Systems. Systems include Engine Instrumentation, Autopilot, Fuel Quantity, Digital Flight Data Recorder, and Flight Director.
- Operation Enduring Freedom Deployment, Bagram AB, Afghanistan
August 2009 - December 2009
- Operation Iraqi Freedom Deployment, Talil AB, Iraq
October 2007 - January 2008
- Active Security Clearance

Undergraduate Assistant, Computer Vision Lab,

Department of Computer Science and Engineering, University of Nevada, Reno
August 2010 - May 2011, August 2011 - January 2012

- Teaching Assistant
 - CS 302, Data Structures: CS 474, Image Processing: CS 485, Computer Vision
 - Instructor: Dr. George Bebis

Co-Op, Special Programs Division,

Nevada Automotive Test Center, Silver Springs, NV

May 2009 - January 2009

- Primary task was to aid in the testing and implementation of electronic systems for the USMC Marine Personnel Carrier Technology Demonstrator vehicle.
- Wrote feasibility reports on electrical systems used, researched and compared COTS electronic solutions with Mil-Std and SAE requirements, as well as bench-tested electronic systems prior to installation.

EDUCATION

University of Nevada, Reno, Reno, NV

Bachelors of Science, Computer Science (Graduated: May 2012)

- UNR GPA: *3.65*, CS GPA: *3.6*
- Adviser: [Dr. George Bebis](#)
- Area of Interest: Computer Vision, Artificial Intelligence, Image Processing
- Specialized Undergraduate Courses: Computer Vision, Advanced Computer Vision, Artificial Intelligence, Simulation Physics, and Image Processing.

Masters of Science, Computer Science (Accelerated M.S./B.S. Program)
(expected graduation date: May 2014)

- Adviser: [Dr. George Bebis](#)
- Research Topic: Human Face Sketch Recognition using Wavelets.
- Courses Completed: Machine Learning, Computer Graphics

Nevada Air National Guard 152 Maintenance Squadron, 152 Air Wing, Reno, NV

2A553B, Instrumentation and Flight Controls Journeyman

- Instrumentation and Flight Controls Craftsman Course, (Currently Taking)
- Airman Leadership School, Correspondance, May 2011
- Instrumentation and Flight Controls Apprentice School, [Sheppard Air Force Base, TX](#), June 2007
- Electronic Principles School, [Keesler Air Force Base, MS](#), January 2007
- Basic Military Training, [Lackland Air Force Base, TX](#), November 2006

TECHNICAL SKILLS

- **Programming Languages/Tools:** C++, Java, Python, C#, Matlab, \LaTeX , Windows/Linux Scripting, some Haskell
- **Software Experience:**
 - Computer Vision and Image Processing : OpenCV, Matlab, NASA Vision Workbench
 - Numerical Computation : Numerical Python, Matlab, FLANN, LibSVM
 - Geographic Information Systems and Satellite Imagery : GDAL
- **Mechanical:** Electronics repair, Soldering, Hand/Power Tools, use of Military/Civilian technical manuals and wiring diagrams.
- **Math:** Multivariable Calculus, Linear Algebra, Signal Processing

PUBLICATIONS

- Marvin Smith, Ara Nefian, “Outlier removal in stereo reconstructions of orbital images”, International Symposium on Visual Computing, 2010.

GROUPS

President, Association for Computing Machinery, UNR (Jan 2010 - May 2011)

Member, Enlisted Association for the National Guard (EANGUS)

Member, Resource Protection Team, 152 Security Forces Squadron, NVANG

HOBBIES

Yoga, swimming, collecting antique instruments

REFERENCES

- Samuel Hancock
Technical Director, Sierra Nevada Corporation
Phone: 775-849-6244
- Master Sergeant Jon Wolland
Guidance and Control Shop Supervisor, 152 MXS, NVANG
Phone: 775-788-4565
- Dr. George Bebis
Professor of Computer Science and UNR Computer Vision Lab Director
Phone: 775-784-6463
- Dr. Ara Nefian
Senior Research Scientist, NASA Ames Research Center
Phone: 650-604-0845