

# Eagle Jones

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## Education

### **University of California**, Los Angeles, CA

Ph.D., Computer Science (in progress)  
Requirements for M.S. degree completed (November 2003)  
Research Assistant, Computer Vision Lab (2003-present)  
Teaching Assistant, CS 174 – Computer Graphics (Spring 2004)  
Research Assistant, Laboratory of Neural Imaging (2002-2003)

### **California Institute of Technology**, Pasadena, CA

B.S., Computer Science (June 2001)  
Teaching Assistant, CS 1/2 – Programming in C/C++ (Winter-Fall 1998)

## Skills

Expert in computer vision and graphics; autonomous vehicles and robot navigation; image, video, and audio compression; C, C++, Java, Python, and various assembly languages; software performance analysis and tuning; Windows, Mac OS X, and Linux operating systems. Familiar with networking, databases, statistical techniques, and parallel computing. Outstanding written and oral communication skills, including basic Spanish. Extensive public speaking in academic/scientific, policy, and philosophical settings. Significant entrepreneurial experience.

## Experience

### **Project Manager**

### **Golem Group, Santa Monica, CA (2004-2005)**

Key member of team which built two robotic trucks, qualifying for and placing well in both the 2004 and 2005 DARPA Grand Challenge off-road autonomous vehicle races. Described as “the little engine that could” by DARPA Director Tony Tether. Contributed to control software, overall system design, testing, and hands-on engineering. Interfaced with sponsors, media, and handled aspects of legal/administrative affairs.

### **Fellow**

### **Entrepreneurial Fellowship Program, Pasadena, CA (2001-2002)**

Selected to participate in Caltech/Art Center College of Design/NSF program designed to teach the skills necessary for the development of a start-up company. Classroom time, mentoring, and hands-on experience in start-up, design, marketing, branding, legal issues, intellectual property, financing, etc.

### **Technical Director**

### **Aneiva, Inc., Ashland, OR (1995-1999)**

Founder of company and one of two programmers for Cydonia (aka Lightbringer), hailed by Computer Gaming World magazine as “. . . the strongest-looking sci-fi adventure in years.” [May 1998] Researched and implemented custom video compression for streaming video. Created image-based rendering technology capable of 360° panoramic viewing.

### **Programmer**

### **Starseed, Inc., Ashland, OR (1997-1999)**

Researched/implemented wavelet image compression for internet accelerator product. Company acquired by Yahoo!.

### **Programmer**

### **Vocal Point, Inc., San Francisco, CA (Summer 1998)**

Evaluated performance of speech recognition software. Designed and developed voice-enabled web browser.

### **Assistant Computer Architect**

### **Intel Corp., Hillsboro, OR, (Summer 1995)**

Worked on the then-prototype P6 processor. Independently discovered critical unexpected performance issues of memory addressing scheme, resulting in pre-production fixes. Wrote assembly code to maximize speed of block memory operations, substantially improving performance and influencing future compiler designs.

### **Research Assistant**

### **Southern Oregon University, Ashland, OR (Summer 1994)**

Built neural network to predict particle storms which destroy satellites. Applied chaotic model to magnetosphere.

## Awards

McKinsey Insight Program (2007)  
Semifinalist, TopCoder Open Marathon Competition (2007)  
Finalist, DARPA Grand Challenge (2004, 2005)  
Green Hills Software Scholarship (1998)  
Caltech Upperclass Merit Award (1998)  
Caltech Freshman Merit Award (1997)  
Rensselaer Medal for Math and Science (1996)  
Autodesk Scholar of Distinction (1996)  
National Merit Scholar – 1600 SAT (1995)

## Professional Activities and Service

### Professional Organization Memberships

Institute of Electrical and Electronics Engineers (IEEE)  
Association for Computing Machinery (ACM)  
Society of Automotive Engineers (SAE)

### Program Committees

IEEE Conference on Computer Vision and Pattern Recognition (2006, 2007)  
IEEE International Conference on Computer Vision (2007)

### Volunteer Work

2nd Lieutenant, Civil Air Patrol (US Air Force Auxiliary)

## Personal Achievements

Completed Ironman Arizona - 2.4 mile swim, 112 mile bike, 26.2 mile run (2005)  
NCAA Water Polo All-American (2000)  
Caltech swimming record holder - 1650, 1000, and 500 yard freestyle  
Private Pilot License  
NAUI SCUBA Certified - Advanced Open Water

## Publications

### Proceedings of Refereed International Conferences

- [1] E. Jones, A. Vedaldi, and S. Soatto. Inertial structure from motion with autocalibration. In *Proc. ICCV Wkshp. on Dyn. Vision*, 2007.
- [2] E. Jones, B. Fulkerson, E. Frazzoli, D. Kumar, R. Walters, J. Radford, and R. Mason. Autonomous off-road driving in the DARPA Grand Challenge. In *Proc. IEEE/ION Pos., Loc., and Nav. Symp.*, 2006.
- [3] E. Jones and S. Soatto. Layered active appearance models. In *Proc. Int. Conf. on Comp. Vision*, 2005.
- [4] G. Doretto, E. Jones, and S. Soatto. Spatially homogeneous dynamic textures. In *Eur. Conf. Comp. Vis.*, 2004.
- [5] A. MacKenzie-Graham, M. Martin, E. Jones, D. Shattuck, R. Jacobs, R. Voskuhl, and A. Toga. Atlas of experimental autoimmune encephalomyelitis in the C57BL/6 brain. In *Int. Mtg. of Soc. for Neuroscience*, 2003.

### Refereed Journal Articles

- [6] R. Mason, J. Radford, D. Kumar, R. Walters, B. Fulkerson, E. Jones, D. Caldwell, J. Meltzer, Y. Alon, A. Shashua, H. Hattori, N. Takeda, E. Frazzoli, and S. Soatto. The Golem Group / UCLA autonomous ground vehicle in the DARPA Grand Challenge. *Journal of Field Robotics*, 23:527–553, 2006.
- [7] A. MacKenzie-Graham, E. Jones, D. Shattuck, I. Dinov, M. Bota, and A. Toga. The informatics of a C57BL/6J mouse brain atlas. *Neuroinformatics*, 1(4):397–410, 2003.

### Book Chapters

- [8] E. Jones. Writing documentation. Designing the user interface. In *More Tricks of Game Prog. Gurus*. Sams, 1995.