

Hrayr Artunyan

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EXPERIENCE: Undergraduate Research Opportunities Program (UROP) *January 2005-Present*

University of California, Irvine
Team Member

Building of a robotic vehicle that can dynamically plot and follow GPS waypoint on a grid map, while avoiding dynamic and static obstacles along its way.

UCI DARPA Grand Challenge Team *August 2004-Present*

University of California, Irvine - Defense Advanced Research Projects Agency (DARPA)
Simulation and Path Planning Team

Building of an autonomous vehicle to traverse a 175 mile course through the Mojave Desert.

- Design and implementation of a simulation system as a test bed for various path planning algorithms
- Collaboration with robotics and obstacle detection teams to determine interfaces between the AI of the vehicle and the various components
- Research utilizing online databases such as *arXiv e-print Archives* and *CiteSeer*. Topics include:
Nonholonomic Motion Planning for Mobile Robots

Student Independent Research Internship (SIRI) *October 2003-February 2004*

Jet Propulsion Laboratories, Pasadena
Intern

- Software development for the Mars Spacecraft Atmospheric Observation project
- Design and development of a UNIX based tool to calibrate the Inertial Measurement Units (IMU) on board of the Mars Exploration Rovers
- Implementation of mathematical concepts such as cubic spline interpolation and quaternion conversion on multiple data streams
- Involved in the development process - preliminary design review, critical design review
- Followed software engineering practices - produced requirement and design documentation

Student Services – Retention Program

Glendale Community College, Glendale
Student Assistant

November 2002-August 2004

- Optimized project management thru development of several database programs for various projects
- Produced VBA code for cross object data manipulation and multi level data entry

EDUCATION: University of California, Irvine *June 2004-Present*

Major: B.S. in Information and Computer Science
Association for Computing Machinery (ACM) member
Expected Graduation: June 2006

Glendale Community College

Scholar's Program
Alpha Gamma Sigma (AGS) Honors Program
Major: Computer Science

June 2001-June 2004

QUALIFICATIONS:

LANGUAGES

C, C++, C#, Java, Visual Basic, HTML, VBA, Jscript; basic knowledge of Matlab and PHP

SYSTEMS

Windows (98, 2000, NT, XP), UNIX, Linux, Solaris, MacOS, DOS

PROJECTS

Graphics 3D: Design and implementation of a 3D wire-frame graphics engine to demonstrate linear algebra topics such as transformation matrices, perspective and also stereo anaglyphic display of 3D objects.

COURSES

Software Engineering, Data Structures and Algorithms, Computer Architecture and Design, Technical Writing, Java, C/C++, UNIX Shell Programming, Networking-Telecommunications, Artificial Intelligence, Embedded Computing Systems