

# DREW A. HALL

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## OBJECTIVE

To secure a challenging research and development and/or digital design position in electrical engineering.

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## EDUCATION

### Bachelor of Science in Engineering, Honors:

University of Nevada, Las Vegas

**Major:** Computer Engineering

**Minor:** Applied Mathematics

**Cumulative GPA:** 4.00 / 4.00 (Class Rank 1 out of 5,800)

**Graduation:** May 2005

### Summa cum Laude

### Honors College

**Relevant Engineering Classes:** Microprocessors, Solid State Devices, Electronics I & II, Embedded Systems, VLSI, VHDL, Digital System Design, Logic and Design I & II, Computer Architecture, Engineering Statistics, and Software Engineering

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## UNDERGRADUATE PROJECTS

### Senior Design Project: Micromouse

Engineered and developed an autonomous robot to compete in the yearly national IEEE Micromouse Competition. The project utilized sophisticated design concepts related to embedded system design, advanced PIC microcontrollers, cutting-edge battery and sensor technologies, and surface mount components. Also designed a graphical simulator in C++ to run under *Microsoft Windows*® to evaluate different maze solving algorithm's quality and efficiency.

### FPGA Project: High Speed Encryption and Authentication (HELIX)

Implemented a form of world renowned cryptographer Bruce Schneier's HELIX algorithm into a SPARTAN II FPGA achieving very high throughput rates. This project currently has a paper under review for publication.

### VLSI Project: Synchronous Cascadable 4-bit Up/Down Counter IC Design

Designed a 4-bit up/down counter chip at the transistor level using a 0.6 micron SCMOS technology, starting from the analytical design to layout using *Magic*® Layout software, culminating in simulation using *PSpice*®.

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## HONORS AND AWARDS

**1<sup>st</sup> Place Micromouse Competition (2005)** - Winner of the Southwest Region Area, Region 6 Micromouse competition

**IEEE Paper Contest Winner (2005)** - Chosen for my paper and presentation on robotics and optimal path finding algorithms

**Outstanding Senior Engineering Student of the Year (2005)** - Awarded by the department to the top student annually

**Engineering Ambassador (2004)** - Chosen to represent the College of Engineering to the community and prospective students

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## COMPUTER SKILLS

**Electrical Engineering Tools:** Cadence Design System (ORCAD Suite – PSPICE, Layout), Logic Aid, Magic, Microchip MPLAB

**Software Development Tools:** C, C++, C#, JAVA, Perl, HTML/XML, Assembly (x86, Motorola), Visual Basic, Visual Studio

**Operating Systems:** Microsoft Windows (95/98/2000/Me/NT/XP), UNIX, LINUX, DOS

**Mathematics Tools:** MATLAB, MiniTAB

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## PROFESSIONAL ASSOCIATION

**Tau Beta Pi Engineering Honors Society:** President (2004-2005), Recording Secretary (2003-2004)

**IEEE Student Chapter:** President (2004-2005), Vice-President (2003-2004)

**Phi Kappa Phi:** Appointed as Vice-President (2004-2005) due to having the highest undergraduate GPA

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## RELEVANT WORK EXPERIENCE

### General Electric Internship (May 2001 – August 2005)

Performed highly accelerated life testing (HALT) and highly accelerated stress screening (HASS) on a new product, and then analyzed and interpreted test results to improve the product by increasing product lifespan and reducing field failures. Developed and maintained large flagship software products, and migrated existing software packages from a flat file design to a high speed database design. Designed and tested a simulator to integrate a new communication protocol into hardware and software. Engineered a three phase motor simulator to facilitate software testing.

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## REFERENCES

Available upon request