

# Guy R. VanHorn

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<http://www.geocities.com/guyvanhorn>

## OBJECTIVE

Seeking employment as a **Mechanical Design Engineer**.

## EDUCATION

**M.S. Mechanical Engineering**, *Utah State University*, Logan UT December 2001 3.40 GPA

Emphasis: solid mechanics, including: structural vibration analysis, static & dynamic theory of plates & shells, stress analysis in composite structures and year series in finite element analysis.

**B.S. Mechanical Engineering**, *Utah State University*, Logan UT May 1993 2.3 GPA

## COMPUTER KNOWLEDGE

FORTRAN	ProEngineer	FEA	AutoCad 14
MS Word/Excel	I-DEAS	MathCAD	Mastercam (currently learning)

## WORK EXPERIENCE

**Graduate Student Employee** October 2000 – present

*Department of Mechanical & Aerospace Engineering* Utah State University, Logan UT

Designed and built various lab projects and acted as a lab TA for the professors I worked for.

**Quality Engineer** August 1999 – May 2000

*Compeq International*, Salt Lake City UT

Quality Control Engineer for PCB manufacturing. Establish Statistical Process Control and historical trends for product first pass yield, defect percentage of throughput to alert for abnormal conditions, defect data analysis and assisting process engineers with feedback for scrap reduction and process improvement.

**Manufacturing Process Engineer Intern**, Summer 1998

*Celestica*, Fort Collins, CO

Worked as Manufacturing Process Engineering intern for PCB manufacturing. Focused on wave solder fixture design, and work on temperature profiling at reflow ovens.

**Math Tutor**, 1994 – 1998

*Snow College and Utah State University*, Ephraim and Logan UT

Worked as a paid tutor in subjects of mathematics and lower level engineering courses.

## ENGINEERING PROJECTS

### CNC Vertical Milling Center

Repaired and reassembled a used Lagunmatic CNC VMC purchased for University manufacturing engineering lab. Taught myself how to run the VMC and then instructed others on its operation.

Established communication link with a PC for mill to interact with Mastercam software.

### Dynamometer project

Designed, built and ran a dynamometer for a lab testing electric motors. The design was rendered on I-Deas Modeling package. Fabrication was done using manual Bridgeport mill and CNC VMC.

Other parts sourced from appropriate vendors.

### **PLC/Pneumatics Lab**

Currently working on laboratory exercise to demonstrate current technology being used in industry for pneumatics actuators and valves. Includes a series of pneumatic manifolds controlled by a PLC with input sensors and switches.

### **Web page development**

Worked on department special projects including online multimedia recruiting presentations and alumni surveys.

### **Senior Design Project**

Team design project consisted of analyzing, designing, and building a single-seat dune buggy to compete in SAE-sponsored Mini-Baja competition. Personal emphasis on project consisted of all engine-related systems. This included a vibration isolation analysis in which an isolation cart rig was built. All drive train components were remounted to it.

### **RELATED EXPERIENCE**

#### **Automotive troubleshooting and repair, 1990 -present**

Extensive experience in all areas of automotive repair. Transmissions, drive train components, braking, cooling, and electrical systems. High success at accurate troubleshooting in all of these, etc.

Recent projects:

- 4" suspension lift added to my '77 Dodge four-wheel drive truck.
- Transmission removal and clutch replacement.
- Automobile timing belt removal and replacement.
- Four-wheel drive transfer case removal and replacement.
- Manual transmission rebuild.
- Performed steering upgrade from manual steering box by replacing with power steering setup.

#### **Oxy-Acetylene and Arc welding work**

Enrolled in non-degree driven welding course teaching basic welding theory and technique. Personal use of oxy-acetylene and stick welding at home on personal projects. Continuous learning process with these.

### **HONORS**

Made the graduate school honor roll with a 3.78 GPA Fall semester 2001.

### **REFERENCES**

Available upon request