

Jacob M. Heiden

13 S Orchard St
Madison, WI 53715
Phone: (608) 443-9912

Objective: To obtain a full time position in Motorsports or similar area working with Data Acquisition, IC Engine Testing, Engine Simulation, Engine Management, or Engine Development.

Experience:

Accumoto Motorsport – Engineer; Intern May 2006 to present Waunakee, WI
Support of multiple IMSA Lite cars operating in both the IMSA Lites series and the SCCA DSR class. *Wins at the National level, SCCA. Multiple Podiums IMSA Lites*

- ECU mapping
- Vehicle Data Acquisition
- Chassis tuning
- Mechanic / Driving Coach

UW – Racing Formula SAE 2002-present, Group Leader 2004-present
Engine and Electrical development for small open wheel vehicle

- Engine intake, camshaft, head, and exhaust Development
- E85 and gasoline engine mapping / design
- Maintain / operate dynamometer and test fixtures
- Oversee and instruct new members
- Developed / Validated Ricardo WAVE engine model
- ECU mapping, wiring, and sensor calibrations
- Embedded system coding in C/C++ and Matlab/Simulink
- Designed Traction, Launch, and Shifting Controls
- *1st place Formula SAE World Champions 2007*

Wacker Corporation, Paint / Roller line summer 2003, 2004 Menomonee Falls, WI
Part preparation / masking for powder coating; wet and dry painting; experience with welding, assembly and maintenance department.

Education: **B.S. Mechanical Engineering** May 2007
University of Wisconsin – Madison Major GPA: 2.905
Held part time job, switched majors partway through college.
Additional course work: Vehicle Dynamics, Automatic Controls, IC Engines, Electrodynamics

West Bend East High School - West Bend, WI
GPA 3.875 Graduated 18th in class of 304
Additional course work: AC/DC motors, Cisco Networking, Digital Logic independent study
Chess Team Captain; Junior Engineering Team Captain; Rube Goldberg Team Captain;
Badger Boys State 2001, 5th grade Volunteer Football Coach

Activities: **Automotive Restoration**, 1966 Mustang, 1979 Trans Am, 1976 Corvette, 1970 Cougar
Frame reconstructions, suspension rebuilds, bodywork, engine rebuilds / performance builds, drivetrain overhauls, interior detailing, electrical diagnostics, painting, buffing and polishing of final paint.

Skills: Dynamometer setup and engine testing / mapping; engine data acquisition; welding (TIG, MIG, stick); vehicle chassis data acquisition (AIM); manual lathe and milling; wet and dry painting; telemetry systems

Software: Matlab and Simulink; Labview; Solidworks; Unigraphics; DynoMax 2000 Pro+; Unix; Linux; Mentor Graphics; Maple; Java; C/C++; Ricardo WAVE; GT Power

ECU Mapping using Mototron, EFI, and Power Commander

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Awards:

- 1st place Formula SAE World Champions 2007
- 1st place Ricardo Powertrain Development Award, 2007
- 2nd place Robert Bosch Corporation Engine Management System Award, 2006
- 1st place Ricardo Powertrain Development Award, 2006
- Polaris Intake System Design Award, 2006
- 2nd place Robert Bosch Corporation Engine Management System Award, 2005
- 1st place Ricardo Powertrain Development Award, 2004
- Fall 2005 Ford FSAE Scholarship
- Jackson Area Business Association Scholarship
- Anna Gossel Memorial Scholarship

Memberships:

- Society of Automotive Engineers
- Sports Car Club of America
- International Motor Sports Association

References:

Glenn R. Bower Ph. D.

Director - UW Madison Formula SAE Automotive Program

Phone: (608) 263-7252

Email: grbower@facstaff.wisc.edu

Mark White

Owner / Driver – Accumoto Motorsport

Phone: (608) 575-1000

Jacob Bergenske

Associate Engineer (AP/EAP3) Powertrain Division – Robert Bosch Corporation

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