

Stephen Carey Smith

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Objective To obtain an engineering position where I can contribute in the field of solid mechanics and machine design using my practical experience from designing a boat drivetrain (Solar Splash) and an HVAC system (McKinstry) in addition to my leadership experience as an Eagle Scout and rock climbing guide.

Education **Cedarville University** Cedarville, OH
May 2009 *Bachelor of Science* Mechanical Engineering, Overall GPA: 3.6

2007 **Jerusalem University College** Jerusalem, Israel
Historical Geography - 4 credits

Skills Software: SolidWorks; AutoCAD; MATLAB; Algor; TK Solver; Microsoft Office 2007
Manufacturing: Manual milling and lathing; CNC machining; TIG, MIG, & arc welding

Honors Eagle Scout - Boy Scouts of America
Valedictorian - Graham High School

Engineering Experience

2008-present **Solar Splash Competition Team** Cedarville, OH
Senior Design Project-Sprint Drivetrain Team

Our team designed a solar boat to race at ASME's Solar Splash 2009. My project was to design, manufacture, and test a new lower gear unit to implement contra-rotating propellers (two props spinning in opposite directions about the same axis).

- Designed a concentric shaft system to drive contra-rotating props
- Manufactured the housing and shafts
- Tested the performance of the drivetrain
- Specified commercially available gears, bearings, seals, and keys
- Collaborated with team members on drivetrain-prop & drivetrain-hydrofoil compatibility

2006-2007 **Trailer Team Leader & Drive Train Team Assistant**

- Designed and built a hydrofoil-compatible boat trailer using SolidWorks and MIG welding
- CNC machined drive train components

Summer 2008 **McKinstry** Seattle, WA
Mechanical Engineering Intern

- Contributed in the design of the HVAC system for Microsoft West Campus
- Calculated building loads and sized AC and chilled water systems
- Drew building plans in AutoCAD

2007 **Formula Society of Automotive Engineers** Cedarville, OH
Jackets Racing - Cedarville University

- Manufactured and assembled components using manual mills and lathes

2006 **Remote Access Well Drilling Rig** Cedarville, OH
Society of Engineers Aiding Missions

- Researched the preliminary design of a drilling rig for backcountry water supply in Liberia

Certifications Rock Instructor Course - American Mountain Guides Association
Single Pitch Instructor - American Mountain Guides Association
Emergency Medical Technician (expired)

Rock Climbing Guide Experience

Summer 2008 **Elements Youth Camp** - Faith Baptist Church - *Camp Volunteer* Seattle, WA
Summers 2006-2007 **Acadia Mountain Guides** - *Climbing Guide* Bar Harbor, ME
Summer 2005 **Philmont Scout Ranch** - Boy Scouts of America - *Climbing Instructor* Cimarron, NM
Summers 2003-2004 **Camp Hugh Taylor Birch** - Boy Scouts of America - *Climbing Instructor* Yellow Springs, OH