

Matthew Roy

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Education

B.S. Mechanical Engineering, [Franklin W. Olin College of Engineering](#), Class of 2009

Scholarship: \$130,000 full tuition merit scholarship

Notable Project Work: [SAE Baja](#), [Senior Consulting Project in Engineering \(SCOPE\)](#), Design for Manufacturing: Light Project, Research: Computational Modeling of Downhole Energy Generation, Distributed Engineering Design: Coffee Cup Holder

Work Experience

[Sandbox Engineering & Design](#) - Mechanical Engineering Principal **2009-present**

Co-founded Sandbox Engineering & Design to provide legal, technical, and facilities support infrastructure for independent and joint ventures.

[The Boathouse Richmond](#) - Software Development **2009-present**

Develop and maintain Django-powered software on Linux virtualized servers to collect customer data and support business analytics.

[Lit Motors](#) - Lead Mechanical Engineer **2010-present**

Design, fabricate, and test of prototype electric vehicles, including gyro-stabilized prototypes that achieve high energy efficiencies for a start-up car company. Raised \$618,000 in Angel and VC money as of Jan 2011.

[Lit Scooters](#) - Mechanical Engineering Consultant **2010**

Created a prototype folding electric cargo scooter, now being pitched to investors for mass production in partnership with a manufacturing firm.

[EVOS Interactive](#) - Mechanical Engineering Consultant **2009-2010**

Wrote software to control mechanical systems and simulate personality using C on an embedded PIC microprocessor.

[Olin College Machine Shop](#) - Assistant Machinist and Student Instructor **2007-2009**

Fulfilled work orders using WaterJet, 2- and 3- axis CNC mills, lathes, laser cutters, and injection molding; trained and certified 54 students in the use of machine tools and equipment.

[DRS Technologies](#) - Cornwell Student Initiative Intern **2007, 2008**

Developed new designs to improve *net system energy efficiency* in two of the company's major product lines by 29.5% (2007); developed and tested control systems to support integration of these designs that are now on the market as [CHAMMPS – Combined Heating Air-conditioning Medium Mobile Power System](#). (2008)

Activities

Networks - Built and maintain a three physical site [Ubuntu linux](#) powered network with native [IPv6](#), [Ceph file storage](#), Google Apps, and Kerberos/LDAP auth.

Volvo 940, 940T - [open-source engine management computers](#) and [dash computers](#) to measure and control engine timing, fuel injections, efficiency, and performance.

Notable Skills

CAD/CAM: Solidworks, Autodesk Inventor, FeatureCAM

Computation/FEA: MATLAB, ANSYS, COMSOL, Maple

Languages: Python, Java, moderate proficiency in: C, BASH Script, JavaScript

