

David Hawkins

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Objective	Continue to grow and expand my programming and development skills in a challenging environment where good ideas have an opportunity to thrive.		
Education	BSE, Civil & Environmental Engineering University of Michigan, Ann Arbor, MI, April 2009		
Experience	Mechanical Engineer / Data Analyst U.S Environmental Protection Agency, Ann Arbor, MI		April 2008 - Present
	<ul style="list-style-type: none">Designed and led a team in developing MOVES Test Suite, a Windows GUI application written in Python to simplify and standardize a QA process for the modeling center. EPA’s Motor Vehicle Emissions Simulator (MOVES) is used by municipalities, states, and nationally to support EPA regulations, as well as in academic research.Designed and developed Engine Mapper, a Windows GUI application written in Python for use in engine calibration to quickly QA, interpolate, and visualize data from an engine dynamometer. This supports EPA’s Light Duty Vehicle Greenhouse Gas National Program.Wrote and maintained Python modules for importing and analyzing data from Portable Emissions Measurements Systems (PEMS), Activity Measurement Systems (PAMS), and laboratory datafiles. The data are homogenized and stored in a MySQL database.Led and contributed to multiple evaporative emission test programs that refined the EPA’s understanding of these emission processes and evaporative leaks.Contributed to a new data and modeling paradigm for the MOVES evaporative emissions calculatorAggregated thousands of fuel samples taken across the country into a relational database to be used as a common fuel library.		
Languages	<u>Proficient</u> <u>Basic</u>	Python, R, MySQL Java, L ^A T _E X, HTML, CSS	
Awards	EPA Science Achievement Award - Chemistry (2012) <i>For innovative fuel research that significantly advances the Agency’s Understanding of the effects of fuel chemistry on vehicle emissions and their impact on atmospheric chemistry</i>		
Publications	Hawkins, D., Hart, C., Brzezinski, D., & Brown, J. (2014) <i>Evaporative Emissions from On-road Vehicles in MOVES2014</i> http://www.epa.gov/oms/models/moves/documents/420r14014.pdf Stuhldreher, M., Schenk, C., Brakora, J., Hawkins, D., Moskalik, A., DeKraker, P. (2015) <i>Downsized Boosted Engine Benchmarking and Results</i> SAE 2015-01-1266		
Etc.	Bike Commuter Triathlete	Rock Climber Musician	