James Adam Buckland
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College Address: 302 South Busey Av., Apt. #102, Urbana, IL 61801
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EDUCATION

Bachelor of Science *in* Mechanical Science and Engineering GPA 3.38

- University of Illinois at Urbana-Champaign, Illinois, USA Fall 2012 — Spring 2016
- KTH Royal Institute of Technology, Stockholm, Sweden Winter — Summer 2015

EXPERIENCE

- **Linguistics Web Developer** Summer 2014 — Fall 2014
  - Completed web backend overhaul, debugging and rewriting for improved maintainability and performance. Oversaw documentation rewrite, performed minor data visualisation / design work. *w/ Dan Roth, Cognitive Computation Group; Department of Computer Science at Illinois*
- **Heat Transfer Modeling** Summer 2013
  - Refactored one-dimensional transient heat transfer numerical modelling software for continuous steel casting from FORTRAN to C with language / performance considerations. *w/ Brian Thomas, Continuous Casting Consortium; Department of Mechanical Science and Engineering at Illinois*
- **Computational Simulation** Fall 2010 — Summer 2012
  - Wrote computational astrochemistry simulation software; designed numerical methods for modeling viscous astrophysical fluid transport. *w/ Colin McNally, Department of Astrophysics, American Museum of Natural History, NYC*
  - Wrote and maintained software pipeline for 3D landscape assembly from JPL Mars Exploration Rover image database. *w/ Carter Emmart, Director of Astrovisualization, American Museum of Natural History, NYC*

OUTREACH

- **CARE Tutoring** at Grainger Engineering Library Summer 2014 —
  - Program Leader with the Center for Academic Resources in Engineering. Tutoring, peer advising, study halls in physics and calculus.
- **Physics Van** at University of Illinois Fall 2013 — Spring 2014
  - Touring rural Illinois, performing live physics-based shows and demonstrations at local schools and libraries. Two-time Engineering Open House winners.

HONORS

2015 Robert M. Stephens Engineering Scholarship

2014 Benjamin A. Gilman International Scholarship; William R. Miller & Martha L. Behr-Miller Scholarship; IPENG Travel Fellowship; Illinois for Illinois (I4I) Travel Scholarship

2013 James Scholars Honors Program; Beatrice Hight Scholarship; Wensel Morava Scholarship

2012 AP Scholar with Distinction; National Merit Scholarship Finalist

TECHNICAL SKILLS

Programming Languages	C, C++, FORTRAN, Java, Python, Processing
Scientific Computing	`numpy`, `scipy`, `matplotlib`
Web Development	HTML/CSS, Javascript, PHP, MySQL, Backbone, Parse
Software Packages	Matlab, Mathematica, LaTeX, DesignBuilder, STAR-CCM+, ProEngineer Wildfire 5.0