James Adam Buckland

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EDUCATION

B.S. in Mechanical Science and Engineering   GPA *3.38*

- *University of Illinois at Urbana-Champaign*, Illinois, U.S.   Fall '12 — Spring '16
  - *courses:* Control Systems, Robotics, Fluid Dynamics, Dynamical Systems, Mechanical Design
- *KTH Royal Institute of Technology*, Stockholm, Sweden   Winter — Summer '15
  - *courses*: Renewable Energy, Computational Methods in Energy, Modeling of Energy Systems

EXPERIENCE

- **Cognitive Computation Group,** Dept. of Comp. Sci. at Illinois   Summer — Fall '14
  - Rewrote website backend, redesigned frontend; improved demo performance and maintainability
  - Organized and rewrote site documentation; wrote linguistics data visualization demos
- **Continuous Casting Consortium,** Dept. of MechSE at Illinois   Summer '13
  - Performed feasibility study on continuous steel casting numerical simulation software rewrite
  - Created dependency charts / refactoring guides for FORTRAN to C software rewrite
- **Hayden Planetarium**, Museum of Natural History, NY   Fall '10 — Summer '12
  - Wrote computational fluid model with numerical methods, performed astrochemistry research
  - Wrote and maintained software pipeline for 3D landscape assembly from JPL database

EXTRACURRICULARS

- **Tutoring** (Grainger Engineering Library)   Summer '14 — Present
  - Walk-in tutoring with Center for Academic Resources in Engineering (Program Leader)
  - Ran study-hall programs for physics/math exams; performed resume reviews for undergraduates
- **Physics Society** (Physics Van Outreach)   Fall '13 — Spring '14
  - Performed educational physics-based shows at local schools and libraries in rural Illinois
  - Led performances with Physics Van at Engineering Open House
- **The Ill Harmonic** (Men's A Cappella)   Fall '12 — Spring '14
  - Founder and lead arranger of on-campus a cappella group; featured soloist and vocal percussion
  - Administrated weekly rehearsals; led vocal training workshops; scheduled performances

HONORS

- Robert M. Stephens Engineering Scholarship ('15), Benjamin A. Gilman International Scholarship ('14), William R. Miller & Martha L. Behr-Miller Scholarship ('14) Illinois for Illinois "I4I" Scholarship ('14), James Scholars Honors Program ('13)

TECHNICAL SKILLS

- *Programming Languages*: Python (numpy, scipy, matplotlib), C, C++, FORTRAN, Java
- *Software*: DesignBuilder, Adapco STAR-CCM+, ProEngineer Wildfire 5.0, PTC Creo, aPriori, MATLAB, Mathematica, LaTeX, UNIX
- *Web Development*: HTML/CSS, Javascript, PHP, MySQL, BackboneJS, ParseJS, AngularJS