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
- o courses: Control Systems, Robotics, Fluid Dynamics, Dynamical Systems, Mechanical Design
- KTH Royal Institute of Technology, Stockholm, Sweden

Winter — Summer '15

o courses: Renewable Energy, Computational Methods in Energy, Modeling of Energy Systems

EXPERIENCE

• Cognitive Computation Group, Dept. of Comp. Sci. at Illinois

Summer — Fall '14

- o Rewrote website backend, redesigned frontend; improved demo performance and maintainability
- o Organized and rewrote site documentation; wrote linguistics data visualization demos
- Continuous Casting Consortium, Dept. of MechSE at Illinois

Summer '13

- o 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

- o 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