Brooke Katherine Fox

815 South Shenandoah Street #103, Los Angeles, California 90035 ⋆ 602 463 4440 ⋆ brooke.k.fox@gmail.com

github.com/brookekfox ⋆ brookekfox.github.io

Software Developer

Research ⋆ Analysis ⋆ Education

PROFESSIONAL PROFILE

○ Resourceful and efficient software developer with a Master of Science in pure mathematics and two years of teaching experience as well as experience supervising others in an educational setting.

○ Capable of communicating complex concepts in easily understood terms. Detail-oriented with exceptional multi-tasking abilities, strong interpersonal and communication skills, and adept in independent operations and team environments.

○ Proficient in Ruby, Ruby on Rails, Javascript (including ES6), AngularJS, TDD with RSpec and Jasmine, LaTeX

○ Experienced in Java, C++, MATLAB, GAP, Magma, Sage

EDUCATION

General Assembly, Santa Monica, California

Web Development Immersion — April 2015

A 12-week full-time bootcamp in full-stack web development. Curriculum organized around individual and team projects.

Northern Arizona University, Flagstaff, Arizona

Master of Science in Mathematics — May 2014

Thesis: Conjugacy classes of cyclically fully commutative elements of Coxeter groups of type A — Dana C. Ernst, Ph.D., advisor

(Digital or printed copy available upon request.)

Northern Arizona University, Flagstaff, Arizona

Bachelor of Science in Mathematics — May 2012

Research: Recent developments in perfect bricks with dimension higher than 2×2 — Jeff Rushall, advisor

(Digital or printed copy available upon request.)

Xavier College Preparatory, Phoenix, Arizona — May 2008

WORK EXPERIENCE

Full-Stack Developer at Logical Reality Design, Pasadena, California — April 2015 – present

Worked on the front- and back-end of several, large-scale client projects. Built with an in-house developed framework which employs a Rails backend and an AngularJS frontend.

Textbook Solutions Author at Chegg, Los Angeles, California — September 2014 – present

Organized and curated content for the student homework support section of chegg.com. Wrote step-by-step solutions to homework exercises for a variety of mathematics textbooks. Successfully explained solutions to complex mathematical problems in a concise and easily understood format.

Graduate Teaching Assistant at Northern Arizona University, Flagstaff, Arizona — August 2012 – May 2014

Primary Instructor

Prepared and delivered class lectures, homework assignments, and exams in a computer and lecture-based class setting. Met with students outside of class. Supervised undergraduate tutors and TAs. Attended weekly course coordination meetings. Administered all grades. Two sections per semester of MAT100 Mathematics Pathway, MAT119 Finite Mathematics, and MAT125 Precalculus.

Supplemental Instructor at Northern Arizona University, Flagstaff, Arizona — January 2010 – May 2010

Attended class lectures for three sections of MAT114 Quantitative Reasoning. Held office hours outside of class. Held exam study sessions.

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(Recommendations available upon request.)

PRESENTATIONS AND PUBLICATIONS

Conjugacy classes of cyclically fully commutative elements of Coxeter groups of type A
    Master's thesis   May 2014
    Northern Arizona University, Flagstaff, Arizona

    Oral presentation given at the Department of Mathematics & Statistics Colloquium   April 2014
    Northern Arizona University, Flagstaff, Arizona

    Oral presentation given at the Algebra, Combinatorics, Geometry & Topology Seminar   January 2014
    Northern Arizona University, Flagstaff, Arizona

Recent developments in perfect bricks with dimension higher than 2×2
    Paper published in the Rose-Hulman Undergraduate Mathematics Journal   May 2012
    Fox, B., 2012, Recent developments in perfect bricks with dimension higher than 2×2, *Rose-Hulman Undergraduate Mathematics Journal*, vol. 13, p. 161-173.

Higher dimensional perfect bricks
    Poster presentation for Undergraduate Research Showcase   May 2012
    Northern Arizona University, Flagstaff, Arizona

    Oral presentation given at the Southwest Undergraduate Mathematics Research Conference   March 2012
    University of Arizona, Tucson, Arizona

    Poster presentation for the Nebraska Conference for Undergraduate Women in Mathematics   January 2012
    University of Nebraska, Lincoln, Nebraska

    Poster presentation for Undergraduate Research Showcase   September 2011
    Northern Arizona University, Flagstaff, Arizona

    Poster presentation for Undergraduate Research Showcase   May 2011
    Northern Arizona University, Flagstaff, Arizona

2×2 perfect bricks and the search for perfect bricks of higher dimension
    Oral presentation given at Friday Afternoon Mathematics Undergraduate Seminar   September 2011
    Northern Arizona University, Flagstaff, Arizona

    Oral presentation given at the Southwest Undergraduate Mathematics Research Conference   March 2011
    Northern Arizona University, Flagstaff, Arizona

Recent developments in numerical semigroups
    Oral presentation given at the Nebraska Conference for Undergraduate Women in Mathematics   January 2011
    University of Nebraska, Lincoln, Nebraska