NICK FAHRENKROG

Portfolio Website: http://nickfahrenkrog.me/
1476 Peachtree Battle Ave NW • Atlanta, GA 30327 • 303-818-9820 • nick.fahrenkrog@gatech.edu • US Citizen

AWARDS/STIPENDS

- DC Internship Program
  - 1 of 2 students selected by Georgia Tech to receive a stipend to intern in Washington DC in Spring 2015
- Awarded best iOS app by Apple Inc. at Hack Georgia Tech against over 700 other students
- Awarded 2nd Most Ambitious App by App-Cow at Bit-Camp
- Faculty Honors (Fall 2013), Dean's List (Spring & Fall 2014, Fall 2015)

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, College of Engineering — Atlanta, Georgia
Bachelor of Science in Electrical Engineering, Minor in Mandarin Chinese — *December 2017*

- GPA 3.68
- Senior (108 Credit Hours)
- Honors Program (1 of 150 Students Chosen)
- Faculty Honors (Fall 2013), Dean's List (Spring & Fall 2014, Fall 2015)
- Studied Mandarin Chinese specific to business at Shanghai Jiao Tong University

EXPERIENCE

TEXAS INSTRUMENTS
Demand Creation Development Intern — *May 2016-Aug 2016*

- Used PL/SQL and Javascript to secure documents for upload/download and export with the correct confidential level
- Discovered and fixed a security flaw in an internal sales tool that was not caught in a recent security audit

STACKFOLIO LLC
Full-end Web Developer — *May 2015-May 2016*

- Developed a marketplace and transaction platform mirroring that facilitated by brokerage firms for banks to buy and sell loan packages
- Integrated Docusign API to handle non-disclosure and transaction agreements on the platform
- Rewrote UBPR data portal from scratch which lead to an 80% improvement in load time
- Implemented group chat and notification system for progression through the transaction process on a Python/Twisted server
- Mentored by Tech Square Labs (a Google for Entrepreneurs incubator) on the business side of being in a Startup

WHITE HOUSE COUNCIL FOR ENVIRONMENTAL QUALITY
Student Intern — *Jan - May 2015*

- Performed data analysis in R that found that the original targets of Executive Order 13693 were not ambitious enough to meet its mission and helped rework the document to include more appropriate targets
- Developed data forecasts used in presentations with federal agencies to support why the targets were selected
- Automated the process of converting excel documents submitted by government agencies into that needed by OMB MAX Analytics
- Orchestrated and engaged in meetings between managers of government agencies and myself

NORTHFIELD TRADING COMPANY
Software Engineer — *Feb 2012 - Aug 2013*

- Processed natural language baseball play-by-play information in Java and stored the results in a MySQL database
- Used Java to predict the outcome of baseball games by setting up a monte carlo simulation weighted by a genetic algorithm to anticipate the progression of plays
- Developed model in R using metrics from collaboration with a sabermetrician

CS1371 COMPUTING FOR ENGINEERS (MATLAB)
Teacher's Assistant — *Jan - May 2014, Aug - Dec 2014*

- Planned and taught undergraduate engineers a 90-minute recitation each week
- Wrote, proctored, and graded students' examinations
- Held office hours to help students with homework and the material taught in class

GLOBAL LEARNING CENTER
Student Intern — *Oct - Dec 2014*

- Used Powershell and Active Directory to automate connecting users to the nearest printer

PROJECTS

BEHEARD WEBSITE - BITCAMP HACKATHON — *April 10-12 2014*

- Awarded 2nd Most Ambitious App by App-Cow
- Used Django to create a website that analyzes twitter to connect representatives with their constituents on important issues

BABELBOARD IOS8 KEYBOARD - HACKGT — *Sept 19-21 2014*

- Awarded best iOS app by Apple Inc.
- Used Swift to create a custom iOS8 keyboard that translates text into other languages and evaluates math expressions

OFF THE GROUND WEB APP - HACKGT

- Used Django and Python to create a service so that passengers can connect a flight with Facebook to optimally seat them based off of unique interests, biographical information, or events attended

BLOOMBERG CODEB COMPETITION

- Used Python to write algorithm to buy and sell stocks on a stock market simulation platform

MATLAB GRAPHICS SHADER

- Applied knowledge of linear algebra to develop a 2-d shader for Matlab

SKILLS

LANGUAGES:

- English - Fluent, Mandarin Chinese - Conversational

PROGRAMMING LANGUAGES:

- Python, PL/SQL, HTML, SASS/CSS, Javascript/JQuery, Java, C++, Matlab, R, Powershell, VHDL

FRONT-END WEB DEVELOPMENT:

- Bourbon.io/Neat/Bitters, JQuery, Zurb Foundation, React.js, Ember.js

BACK-END WEB DEVELOPMENT:

- Django, Parse, MongoDB, SQL

PROGRAMMING TECHNIQUES:

- MPI Threads, PThreads, OpenGL

DIGITAL SIGNAL PROCESSING:

- Sampling and Aliasing, Discrete Time Signals and Systems, Fourier Transforms, Z-Transform, Digital Filters

DIGITAL SYSTEMS:

- Finite State Machines, Sequential and Combination Logic Circuits, Instruction Set Architectures, Microcode

CLEANROOM EXPERIENCE:

- Manufactured System-in-Package Substrate Using Photolithographic Processes

CIRCUIT DESIGN:

- Oscillators, First & Second Order Filters, Half & Full Wave Rectifiers

ELECTRICAL ENERGY SYSTEMS:

- Renewable Energy Modeling (Hydroelectric, Solar, Wind), Energy Storage, Three Phase Rectifiers, Buck Converters

TASK AUTOMATION:

- Windows Powershell, Active Directory, Visual Basic

SOFTWARE & INSTRUMENTATION:

- Excel (including VBA Macros), NI Labview, LaTeX, MAX Collect & Analyze, MathCad, LTSpice, NI Multisim
- NI myDAQ, ARM mbed, Oscilloscope, Soldering Iron