KEVIN P. GAFFNEY

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Education

Graduate Student in Computer Sciences 2018 – Present
University of Wisconsin-Madison | Madison, WI

Bachelor of Science in Computer Science 2013 – 2018
Bachelor of Science in Biochemistry
University of Oklahoma | Norman, OK
Cumulative GPA: 3.91

Education Abroad Summer 2014
Arezzo, Italy

Experience

Research Assistant August 2018 – Present
Database Systems, University of Wisconsin-Madison | Madison, WI
Advisor: Jignesh Patel, Ph.D.

- Developed core components of Hustle, an open-source, scalable data platform built on Apache Arrow
- Built and evaluated a novel modular transaction scheduler that provides isolation guarantees as a service

Data Engineering Intern Summer 2018
SONIC Drive-In Corporate | Oklahoma City, OK

- Engineered full-stack web application that integrated with existing APIs to display customer information to reduce help desk wait time
- Developed SFTP server to securely receive and process files from vendors

Research Intern Summer 2017
UConn Health Center for Cell Analysis and Modeling | Farmington, CT
Advisors: Leslie Loew, Ph.D. and Jim Schaff

- Developed open-source software solutions for microscopy image processing and computational cell modeling
- Integrated project into ImageJ, a widely used platform for scientific image analysis

Undergraduate Researcher January 2017 – May 2017
OU Advanced Medical Imaging Core Facility | Norman, OK
Advisor: Bin Zheng, Ph.D.

- Built computer-aided scheme to detect post-surgery residual brain tumor with high accuracy
- Collaborated with physicians to gather and fulfill requirements for software to be used in a clinical setting

Software Engineering Intern August – December 2016
Irani Center for the Creation of Economic Wealth | Norman, OK
Advisor: Jeff Moore

- Collaborated with graphic designer and market researchers to develop gamified educational application that reduces knowledge gaps among pediatric gastrointestinal disease patients

Fleming Scholar Summer 2012
Oklahoma Medical Research Foundation | Oklahoma City, OK
Advisor: Timothy Griffin, Ph.D.

- Researched protective effects of exercise pre-conditioning on the activation of ion channels implicated in osteoarthritis pain
- Worked closely with a fellow student and advisor to design experiments, analyze data, and deliver formal presentation to faculty

Leadership and Involvement

OU Student Alumni Association | *Chair* May 2015 – May 2016

- Oversaw executive team of 7 students and 20 student ambassadors
- Programmed several events that connected students with alumni, including a gratitude event with over 200 attendees

Campus Activities Council Soonerthon | *Executive Team* October 2014 – March 2015

- Individually raised over $1800 for the Children's Hospital Foundation
- Worked with other students to facilitate a twelve-hour dance marathon that collectively generated over $500,000 in donations

Software

VCell @ ImageJ	Java extension for ImageJ that bridges quantitative microscopy and computational cell modeling
GOALed	Mobile application for quantification of rehabilitative therapy
EMMA	Gamified educational platform for children with inflammatory bowel disease
ICaD	Informed consent and dictation helper for residents in medicine (currently in development)

Honors

UConn Health Undergraduate Summer Research Fellowship
1 of 12 awarded in 2017 to conduct research in final summer of college

University of Oklahoma National Merit Scholar
Awarded in 2013 for academic excellence to cover the cost of undergraduate tuition for 5 years

Oklahoma Medical Research Foundation Sir Alexander Fleming Scholar
1 of 9 awarded in 2013 to conduct research in the summer between high school and college

Publications and Posters

E. Gaffney, **K. P. Gaffney**, L. Bartleson, C. Dodds. Goal Attainment Scaling Made Easy with an App: GOALed. *Pediatric Physical Therapy*. April 2019. doi: 10.1097/PEP.0000000000000602.

K. P. Gaffney, J. Schaff, A. Deb Roy, Y. Wu, L. Loew. The Virtual Cell plugin for ImageJ: linking quantitative microscopy and computational modeling. UConn Health Undergraduate Summer Research Fellowship (Poster), Farmington CT. August 2017.

K. P. Gaffney, F. Aghaei, J. Battiste, B. Zheng. Automated detection and quantification of residual brain tumor using an interactive computer-aided detection scheme. *Proc. SPIE 10134, Medical Imaging 2017: Computer-Aided Diagnosis*. March 2017. doi: 10.1117/12.2254501.