

EMILY FURST

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EDUCATION

University of Washington
Ph.D. Computer Science and Engineering **In Progress**
Advisor: Mark Oskin

College of Saint Benedict
B.A. Mathematics and Computer Science **May 2015**
magna cum laude
Honors Thesis: Parallel Preconditioners for Finite Element Computations

AWARDS AND HONORS

Phi Beta Kappa, member
Marilyn Fries Endowed Regental Fellow, *University of Washington*
Graduated with distinction in Mathematics and Computer Science,
College of Saint Benedict
MapCores – Mathematics, Physics, Computer Science Research Scholar,
College of Saint Benedict
Regent/Trustee Academic Scholarship Recipient, *College of Saint Benedict*

CONFERENCE & WORKSHOP PUBLICATIONS

Profiling a GPU Database Implementation
Emily Furst, Mark Oskin, and Bill Howe
13th Intl. Workshop on Data Management on New Hardware (DaMoN), 2017 (Collocated with Sigmod)

Parallelizing Instance-Based Data Classifiers
Imad Rahal, **Emily Furst**, and Ramzi Haraty.
29th Intl. Florida Artificial Intelligence Research Society Conference (FLAIRS), 2016

RESEARCH EXPERIENCE

University of Washington – Mark Oskin, Seattle, WA
Graduate Research Assistant **September 2015 – Present**
Worked as part of the Computer Architecture lab. Looked into implications of general purpose workloads on GPU architectures.

Sandia National Laboratories – Jonathan Hu, Albuquerque, NM
Technical Summer Intern **May 2015 – August 2015**
Conducted research on multigrid solvers and developed adapter code within the Trilinos Project utilizing Nvidia's AmgX software. Learned valuable team software development skills and gained experience working in a national laboratory setting.

Department of Computer Science – Michael Heroux, College of Saint Benedict, St. Joseph, MN

Computer Science Research Student

January 2013 – May 2015

Conducted research in the area of parallel computing. Worked with various benchmarks and computational software packages. Research expanded into senior thesis. Gained experience with different computer architectures and parallelization techniques.

College of Saint Benedict, St. Joseph, MN

Independent Learning Project

August 2014 – May 2015

Continued research from a previous data mining course. Created and analyzed time performance of several parallel implementations of the Naïve Bayes and K-Nearest Neighbors classification algorithms. Utilized both CPU and GPU architectures to achieve parallelism. Wrote a technical report summarizing procedure and results.

TEACHING EXPERIENCE

Department of Computer Science and Engineering, University of Washington, Seattle, WA

Graduate Teaching Assistant

Fall 2016, Winter 2017

Was a teaching assistant for a professional masters parallel programming course as well as introductory computer science course in java. Helped with assignment creation, website maintenance, and grading. Hosted office hours and assisted students with assignments.

Department of Computer Science, College of Saint Benedict, St. Joseph, MN

Computer Science Teaching Assistant

Fall 2012

Supervised labs and provided assistance when needed. Provided feedback on lab projects. Graded labs and checked for completion.

Department of Computer Science, College of Saint Benedict, St. Joseph, MN

Computer Science Tutor

Fall 2012

Was available to answer questions from students on labs and homework assignments. Assisted students from all introductory level computer science courses.

WORK EXPERIENCE

Adventium Labs, Minneapolis, MN

Student Intern

Summer 2012

Helped with development of iNeuron, an interactive educational tool for the teaching of neuroscience and mental health concepts. Attended project meetings and product testing events. Assisted in testing and development of graphics. Gathered and organized relevant neuroscience information.

SERVICE

Member, University of Washington CSE Prospective Student Committee

2016

Social Chair, University of Washington CSE Event Committee

2016-2017