

Nicholas Hanson-Holtry

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Education

Bachelor of Science in Computer Science

Rice University, Sid Richardson College

- GPA: 3.61/4.00 (Major GPA: 3.68/4.00)

Fall 2012 to Spring 2016

Houston, Texas

International Baccalaureate Diploma

Southridge High School

Fall 2010 to Spring 2012

Portland, Oregon

Research Experience

Rice University

Houston, Texas

Department of Computer Science

Dr. Swarat Chaudhuri

Summer 2015

- Investigated a computational definition of ethical fairness (hiring practices sensitive to personal attributes like race, etc).
- Investigated formal methods techniques to ensure fairness in probabilistic or machine learning classification algorithms.
- Investigated post hoc verification of fairness of a classification result.

Dr. Vivek Sarkar

Spring 2015

- Investigated tradeoffs among parallel `map` implementations.
- Optimized the parallel computing suite Habanero Java.

Dr. Luay Nakhleh

Summer 2014

- Researched introgressed genes in the *mus musculus* genome.
- Applied clustering algorithms to protein-protein interaction network data to confirm previously identified genome patterns.
- Identified previously unknown introgressed gene candidates to be further investigated by an adjacent group in the lab.

Dr. Devika Subramanian

Spring 2013

- Applied machine learning algorithms to medical data.

Teaching Experience

Rice University

Houston, Texas

Department of Computational and Applied Mathematics

Introduction to Computational Engineering *Spring 2013 to Spring 2016*

with Dr. Steven Cox, Dr. Franklin Kenter, Dr. Illya Hicks

- Taught one hour-long break-out section of the course once per week; each section contained between five and twenty students.
- Taught the main section of the course when the professor was unavailable; contained approximately one hundred students.
- Created original course content including two homework assignments.
- Held weekly office hours and graded assignments and exams.

Department of Computer Science

Principles of Parallel Programming *Spring 2015, Spring 2016*

with Dr. Vivek Sarkar, Dr. Eric Allen

- Held weekly office hours and graded assignments and exams.

Reasoning About Algorithms

Fall 2015

with Dr. Swarat Chaudhuri

- Taught one hour-long tutorial session approximately bi-weekly; each session contained between five and twenty five students.
- Held weekly office hours and graded assignments and exams.

Computational Thinking

Fall 2013, Fall 2014

with Dr. Scott Rixner

- Supervised a flipped-classroom environment; interacted with approximately fifteen students approximately ten times a week.
- Held weekly office hours and graded assignments and exams.

Work Experience

Jones McClure Publishing

Houston, Texas

Software Development Intern

Summer 2013

- Created a mobile version of the O'Connor's Online platform.
- Created administrative tools governing the behavior of the mobile site.

Personal Projects

YASP: Another Stats Page (<https://yasp.co>)

Co-Founder, Software Developer, Public Relations

Fall 2014 to present

- Developed new features, maintained existing codebase, and marketed YASP: a free, volunteer-developed, open-source, project that provides game- and player-specific statistics for the video game Dota 2.

Hackathons

HackRice (hosted by The Rice CS Club)

Spring 2015, Spring 2016

Technical Proficiency

Mastery (≥ 5 classes): Java

Proficiency (2 – 4 classes): Python, C, Matlab

Familiarity (≤ 1 class): JavaScript/HTML/CSS, SQL, Scala, OCaml, Dafny

Extracurricular Activities

Rice University Queer Resource Center (QRC)

Houston, Texas

Co-Founder and President

Fall 2014 to Spring 2016

- Facilitated discussion among approximately twenty disparate committees.
- Wrote a funding proposal to the Rice Undergraduate Student Association to found the QRC and was approved by the student body to receive \$5,000.
- Headed the Sexual Assault Committee, worked to update Ally Training, worked to potentially hire a part-time staff person to support the QRC, investigated founding a queer support group, and created the QRC's website.

Out for Undergrad Technology Conference

San Francisco, California

Student Participant

25-27 September 2015

- Attended OUTC: a non-profit conference dedicated to helping high-achieving LGBTQ undergraduates in technologically-relevant STEM fields reach their full potential in their careers.

Sid Richardson College Academic Fellows Program, fellow

Fall 2014 to Spring 2016

Rice University Student Ambassador Program, ambassador

Spring 2013 to Spring 2016

Rice University Peer Academic Advisor Program, advisor

Spring 2013 to Spring 2016

Awards and Honors

Sid Richardson Athenian Award	<i>Spring 2016</i>
Rice Alumni Pride Award	<i>Fall 2015</i>
President's Honor Roll	<i>Fall 2014, Fall 2015</i>
John and Harriet Millington Scholarship	<i>Fall 2014, Fall 2015</i>
Lon Wilson Service Award	<i>Spring 2015</i>
Genevieve Parkhill Lykes Scholarship	<i>Fall 2014</i>
Bracht-Verlander Scholarship	<i>Fall 2012</i>
National Merit Quarterfinalist	<i>Spring 2012</i>
AP Scholar with Honor	<i>Spring 2012</i>
National Honor Society	<i>2011 to 2012</i>

Pertinent Coursework

Rice University	<i>Houston, Texas</i>
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Department of Computer Science

Advanced Topics in Object-Oriented Design (B)	<i>Spring 2016</i>
Advanced Computer Game Creation (B+)	<i>Spring 2016</i>
Tools and Models for Data Science (A)	<i>Fall 2015</i>
Functional Programming (A)	<i>Fall 2015</i>
Operating Systems and Concurrent Programming (B)	<i>Spring 2015</i>
Introduction to Computer Security (A+)	<i>Spring 2015</i>
Reasoning about Algorithms (A)	<i>Fall 2014</i>
Compiler Construction (A-)	<i>Fall 2014</i>
Object-Oriented Design (A)	<i>Fall 2014</i>
Principles of Parallel Programming (B)	<i>Spring 2014</i>
Introduction to Computer Systems (A-)	<i>Spring 2014</i>
Introduction to Program Design (A)	<i>Fall 2013</i>
Algorithmic Thinking (A-)	<i>Spring 2013</i>
Fundamentals of Computer Engineering (B-)	<i>Spring 2013</i>
Computational Thinking (A)	<i>Fall 2012</i>
Introduction to Computational Engineering (A+)	<i>Fall 2012</i>

Department of Philosophy

Continental Philosophy (A-)	<i>Spring 2016</i>
Mathematical Logic (audit)	<i>Fall 2014</i>
History of Philosophy II (audit)	<i>Spring 2014</i>
History of Philosophy I (B+)	<i>Fall 2013</i>
Social and Political Philosophy (A-)	<i>Spring 2013</i>
Theory of Knowledge (transfer)	<i>2011 to 2012</i>
Ethics (transfer)	<i>2011 to 2012</i>

Standardized Test Scores

GRE

November 2015

- Quantitative: 164/170 (88th percentile)
- Verbal: 161/170 (87th percentile)
- Writing: 4.5/6.0 (80th percentile)

SAT

October 2011

- Mathematics: 750/800 (97th percentile)
- Reading: 790/800 (99th percentile)
- Writing: 760/800 (99th percentile)

Miscellaneous Information

Citizenship: USA