

# Sal Aguinaga

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## Education

Ph.D. Candidate, **University of Notre Dame**, Computer Science and Engineering, **expected: 2017**  
M.S., **University of Notre Dame**, Computer Science and Engineering, 2016  
B.S., **Northern Illinois University**, Electrical Engineering, 1995

## Professional Experience

2011 to present:	<b>PhD Candidate</b> , <a href="#">Data Science Group</a> ; Computer Science and Engineering
2013 to 2014:	<b>Mobile Design Consultant</b> , aBitofAlchemy, Mishawaka, IN; mobile app development; Responsibilities: design mobile apps in computer vision for color detection
2008 to 2011:	<b>Staff Design Engineer</b> , <a href="#">Dhar Lab</a> , <a href="#">Northwestern University</a> ; hardware, software and system development; managing both the project and small team of developers; software development of a C++ desktop app for clinical hearing tests
2006 to 2008:	<b>Senior design engineer</b> , <a href="#">Motorola</a> , Libertyville, IL; Mobile phone board-level hardware; next-generation phone platform design, validation, and prototyping; chip-set validation, board design and signal integrity simulation
2003 to 2006:	<b>Research tech</b> , Electrophysiology, Dallos Lab, <a href="#">Northwestern University</a> Responsibilities: electrophysiology recordings from cell-line and animal models
1997 to 2003:	<b>Hardware Design Engineer</b> , 3Com (Acquired by <a href="#">HPE</a> ), Rolling Meadows, IL; Telecomm (VoIP and modem design); enterprise level VoIP system architecture design; intercommunication infrastructure (wired/optical), signal integrity
1995 to 1997:	<b>Jr. Hardware Engineer</b> , VisionTek (now <a href="#">VisionTek Product LLC</a> ), Gurnee, IL; Memory and hard-drive peripherals

## Funding Awards and Teaching Experience

Mar. 2017:	DoE Office of Science Graduate Student Research Award recipient; Argonne National Laboratory, Mathematics and Computer Science, Lemont, IL
Sep. 2016:	Young Scientist 4th Annual Heidelberg Laureate Forum; selected and funded to attend as part of the US delegation; Heidelberg, Germany
Spring 2017	Network Science, <b>Teaching Assistant</b> , undergraduate and graduate level course; University of Notre Dame
Spring 2013	Mobile Application Projects, <b>Teacher</b> , undergraduate & graduate levels, mobile computing focusing on iOS & Android platforms; University of Notre Dame

## Technical Skills in Computer Science and Engineering

C/C++:	Tens of thousands lines of code (tools implemented for research)
ObjectiveC:	iOS and Mac platforms, tens of thousands lines of code (app dev)
Java:	Android mobile platforms, thousands of lines of code (app dev)
Python/R:	Numpy, SciPy, Scikit-learn, Pandas, NetworkX, iGraph, visualization & mining
Databases:	MySQL server level and for mobile (Parse, MySQL, SQLite, and CoreData)
BigData:	Experience with MapReduce, Hadoop, Spark, Matlab (Octave)
Hardware Engineering:	Board-level circuit design, circuit simulation, noise analysis, and high-speed signal integrity simulation using Cadence and Mentor Graphics tools