Oliver Chang

Curriculum Vitæ

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Education

2012–Present **Bachelor of Science, Computer Science & Geography**, *University of Miami*, Coral Gables, FL, *3.8 GPA*.
Mathematics Minor and Certificate in Geographic Information Systems

Research Experience

2015–Present **Research Experience for Undergraduates**, *A WiFi Localization-based Approach to Analyzing Probe Requests*, Florida International University, Miami, FL.
- Captured WiFi probe requests with a WiFi Pineapple to use with ad hoc localization strategies to passively place users in environments
- Built upon an openly developed application to create an extensible platform for the research of WiFi localization techniques

Summer 2015 **Research Experience for Undergraduates**, *Optimization Opportunities for nek5000 on Blue Waters*, Parallel Computing Institute, University of Illinois, Urbana-Champaign, Urbana, IL.
- Profiled nek5000, a Fortran MPI fluid dynamics simulator, to evaluate calculation/communication optimizations
- Pushed scaling limits of nek software against Blue Waters' hardware to achieve a 5% speedup on PGI compilers

Spring 2015 **Research Experience for Undergraduates**, *Localization through WiFi Signal Strength with Android*, Florida International University, Miami, FL.
- Worked collaboratively with two other students to create localization tools based on WiFi and LTE alternatives to GPS
- Created Android app for training & localization via WiFi using modern best practices like Fragment & DataProvider

Summer 2014 **Summer Internship Program**, *Automating Metadata Compliance Checking*, Physical Oceanography Distributed Active Archive Center, NASA Jet Propulsion Laboratory, Pasadena, CA.
- Consolidated existing metadata checkers for netCDF into a Python framework with verifiable suggestions
- Lowered cost & difficulty of compliance by creating a RESTful platform over a dependency-heavy local installation

Professional Experience

2014–Present **Undergraduate Teaching Assistant**, *Computer Science Department, University of Miami*, Coral Gables, FL.
- Reviewed Java code for Intro to Programming with an emphasis on idiomatic, readable code
- Challenged small labs of Intro to Data Structures & Algorithms students with visualizations emphasizing edge cases'

2013–2014	**Software Engineering Intern**, *Senzari, Inc.*, Miami, FL.
	○ Led visualization for a Django dashboard written with Google Charts & CoffeeScript used to track visitor analytics
	○ Built one of the first Firefox OS Apps in HTML5/jQuery Mobile to construct graph queries, once rated 4 stars

Publications and Presentations

2015	**GPS & WiFi Choke Point Analysis**, *Poster*, University of Miami GIS Day.
2015	**Analyzing the Scalability of Nek5000**, *Poster*, Summer Research Poster Session.
	Presented in open house to University of Illinois, Urbana-Champaign community
2014	**Improving Compliance for Earth Science Data Records**, *Poster*, Fall Meeting of American Geophysical Union.
2014	**Automating Metadata Compliance Checking**, *Presentation*, Research Presentation Day.
	Final Presentation for Jet Propulsion Laboratory Summer Internship Program
2014	**Adventures in Cheminformatics**, *Presentation*, University of Miami Computer Science Department.
	Final Presentation for fulfillment of Computer Science Project Planning course

Technical Skills

Basic	Fortran, MPI, Ruby, R, UML Modeling, API Design
Intermediate	JavaScript, C, LaTeX, Unit Testing, SQL
Advanced	Python, Java, Unix, Android Software Development Kit

Honors

Nov 2015	Top three GIS Day undergraduate posters
Fall 2015	Supported by REU Supplement to NSF Grant CNS-1446570
Summer 2015	Supported by NSF grant CCF-1263145
Spring 2015	Supported by REU Supplement to NSF Grant CNS-1406968
2012	National Merit Scholarship

Service

2015–Present	Vice President for University of Miami (UM) chapter of Association for Computing Machinery
2015	Trained in the Responsible Conduct of Research by the National Center for Professional & Research Ethics
2014–Present	Peer Tutor for UM's Camner Academic Resource Center