

Oliver Chang

Curriculum Vitæ

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Education

- 2012–Present **Bachelors of Science, Computer Science & Geography**, *University of Miami*, Coral Gables, 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.
- 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-Champaign.
- 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.
- 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.
- 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.
- 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.
- Led visualization for a Django dashboard written with Google Charts & CoffeeScript used to track visitor analytics
 - Built one of the first FirefoxOS Apps in HTML5/jQuery Mobile to construct graph queries, once rated 4 stars

Publications and Presentations

- 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

- 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