Miguel Velez

Ph.D. Student in Software Engineering

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"Premature optimization is the root of all evil" -Donald Knuth

Education

2016–Present	**Ph.D. Software Engineering**, *Carnegie Mellon University*, Pittsburgh, PA, USA. Advisor: Christian Kästner.
2010–2015	**B.A. Computer Science (Physics minor)**, *University of St Thomas*, St. Paul, MN, USA. Advisor: Patrick Jarvis. Summa Cum Laude paper: "Current and Future Relationships Between Robots and Humans."

Research Experience

2016–Present	**Graduate Research Assistant**, *Carnegie Mellon University*, Pittsburgh, PA, USA.
Summer 2015	**Research Intern**, *Massachusetts Institute of Technology*, Cambridge, MA.
2014–2015	**Undergraduate Student Researcher**, *University of St. Thomas*, St. Paul, MN.

Industry Experience

Spring 2016	**Application Developer/Software Engineer**, *Sportradar US*, Minneapolis, MN. Accepted full-time offer. Developed an ETL application using Ruby that provided data for the NFL Radar360 research tool.
Fall 2015	**Application Developer/Software Engineer**, *Sportradar US*, Minneapolis, MN. Built a Ruby monitoring application to parse and build Formula 1 feeds.
Spring 2015	**Jr. Application Developer**, *SportsData/Sportradar US*, Minneapolis, MN. Implemented an application to parse and build MLB feeds using Ruby.
2013–2015	**Cloud Developer Intern**, *Valtira*, Minneapolis, MN. Implemented and maintained web applications with Java servlets, AngularJS, and MySQL databases.

Publications

Refereed Conference Publications

[1] Miguel Velez, Jason Sawin, Alexia Ingerson, and David Chiu. "Improving Bitmap Execution Performance Using Column-Based Metadata". In *The IEEE 4th International Conference on Future Internet of Things and Cloud (FiCloud)*. Vienna, Austria, Aug. 2016. (30% acceptance rate).

Miscellaneous

[5] Miguel Velez and Jason Sawin. *Improving the Efficiency of CHA through Parallelization*. Poster. Inquiry at St. Thomas. St. Paul, MN, USA, May 2016.

[4] Miguel Velez and Jason Sawin. *Faster WAH Compression Querying through the Use of Metadata*. Poster. Consortium for Computing Sciences in Colleges Midwest Region. 1st place Discovery Track. Evansville, IN, USA, Oct. 2015.

[3] Miguel Velez and Armando Solar-Lezama. *Simpler Implementation of Sketches through Enhanced Expressiveness*. Poster. MIT Summer Research Poster Session. Cambridge, MA, USA, Aug. 2015.

[2] Miguel Velez. *Current and Future Relationships Between Robots and Humans*. Summa Cum Laude Paper. Apr. 2015.

[1] Miguel Velez, Peter Gittins, and Jason Sawin. *Extending SMILES to Encode Reaction Mechanisms*. Poster. Inquiry at St. Thomas. St. Paul, MN, USA, May 2014.

Awards and Honors

- **MSRP Research Internship at MIT**, 2015. Acceptance rate: 10.5%
- **CCSC:MW 2015 1st place Student Posters & Showcase Discovery Track**, 2015. $100
- **UST Student Travel Grant**, 2015. $750
- **UST Collaborative Inquiry Grant**, 2014, 2015. $2000
- **UST International Student Leadership Scholarship**, 2012. $500
- **Bev and Pat Flaherty Scholarship**, 2011-2015. $14,000
- **UST Dean's Honor List**, 2010-2015.
- **University of St. Thomas International Scholarship**, 2010-2015. $80,000
- **University of St. Thomas Tuition Scholarship**, 2010-2015. 40% discount
- **American Field Service International Scholarship**, 2008-2009.

Other Interests and Activities

- Science Club for Girls volunteer. Cambridge, MN. June 2015
- UST Game Design Club 2014 – 2015.
- Note taker 2013, 2015. Helped two students with disabilities to take notes in class.
- UST Computer Science Consultant 2012 – 2015.
- UST Computer Science Club 2011 – 2015.
- UST Globally Minded Student Association 2010 – 2015.
- St. Thomas Activities and Recreation President 2012 – 2013.
- St. Thomas Activities and Recreation Intern 2011 – 2012.
- UST Spanish Tutor 2010 – 2012.
- 2 STEM Learning Communities 2011.
- UST Morrison Hall Council 2010 – 2011.

References

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