JUSTIN SVEGLIATO

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EDUCATION

University of Massachusetts, Amherst, MA (June 2016 – *Expected* May 2022)
MS/PhD in Computer Science with a Concentration in Artificial Intelligence
Advisor: Dr. Shlomo Zilberstein
Group: *Resource-Bounded Reasoning Lab*
4.0 GPA

Marist College, Poughkeepsie, NY (September 2010 – May 2014)
BS in Computer Science and Philosophy with a Minor in Mathematics
Valedictorian, Summa Cum Laude
4.0 GPA

HONORS AND AWARDS

University of Massachusetts, Amherst, MA

- The Victor Lessor Graduate Scholarship in Artificial Intelligence – *Awarded to a top incoming graduate student*

Marist College, Poughkeepsie, NY

- Valedictorian – *Awarded to the top graduating student*
- National Science Foundation Scholarship Award – *Included a full scholarship for all years of study*
- Excellence Award in Computer Science – *Awarded to the top graduating student in computer science*
- Excellence Award in Philosophy – *Awarded to the top graduating student in philosophy*
- Intern of the Year – *Awarded to the top graduating student for excellence in industry*
- The Fiovranti Memorial Scholarship for Athletics – *Awarded for excellence in cross country and track and field*
- Summa Cum Laude – *Awarded to graduating students with at least a 3.85 GPA*
- Deans' Circle – *Admitted to a selective honors organization comprising 3% of enrollment*
- Deans' List – *Awarded to students with at least a 3.6 GPA (all semesters)*
- The Presidential Scholar Student Speaker – *Selected to give a talk to the top accepted prospective students*

RESEARCH EXPERIENCE

University of Massachusetts, *College of Information and Computer Sciences*, Amherst, MA
Research Assistant, Artificial Intelligence (June 2016 – *Present*)

- Designing a model for semi-autonomy—an extension of Markov decision processes—that formalizes the sort of system that can operate only under certain conditions and require the aid of a human to achieve its goals
- Extending semi-autonomous systems to encapsulate the transfer of control between a human and a self-driving car that must occur during difficult tasks in noisy, dynamic, complex environments
- Implementing a suite of simulated experiments that involve transfer of control between a human and a self-driving car to evaluate and examine the properties of semi-autonomous systems
- Developing online meta-level reasoning techniques using Markov decision processes that monitor and control algorithms that trade off decision quality with computation time

Marist College, *School of Computer Science and Mathematics*, Poughkeepsie, NY
Research Assistant, Distributed Graph Database Systems (April 2015 – June 2016)

- Investigated methods of optimizing queries against a distributed graph database system by swapping vertices and edges across worker nodes to decrease latency and increase parallelization
- Enhanced a distributed graph database system with analysis functions that record and report the location of vertices and edges on worker nodes
- Reviewed papers on distributed graph database systems including query optimization and data deduplication

Research Assistant and Software Developer, Stimulus-Response Testing (February 2013 – October 2015)

- Developed an open source psychological testing framework used to customize and administer stimulus-response

tests through a user-friendly interface
- Implemented a prototype of a customizable implicit association test for an IEEE conference demonstration

Research Assistant, Regular Expressions and Data Compression (September 2013 – January 2014)
- Investigated methods of applying extended regular expressions to data compressed using LZ78 and LZW
- Built a web application that compressed data using LZ78 and SLP while also generating the corresponding dictionaries and grammars
- Summarized and reviewed papers on extended regular expressions and lossless data compression algorithms including LZ77, LZ78, and LZW

PUBLICATIONS, CONFERENCES, AND PRESENTATIONS

- Matheus, C.C. & Svegliato, J. [In Press]. OpenSR: An open source stimulus-response framework. *Human Technology*.
- Labouseur, A.G., Svegliato, J., & Hwang, J. [In Press]. Distributed Graph Snapshot Placement and Query Performance in a Data Center Environment. In *Proceedings of IEEE International Conference on Computational Science and Computational Intelligence*, Las Vegas, NV.
- Svegliato, J. (April, 2014). The Inadequate Ontological Foundation of Libertarian Free Will. Presented at the *4th Mid-Hudson Undergraduate Philosophy Conference,* Poughkeepsie, New York.
- Matheus, C.C. & Svegliato, J. (October, 2013). Open Stimulus-Response Framework. Presented at *Marist College Research Symposia*, Poughkeepsie, New York.
- Matheus, C.C. & Svegliato, J. (May, 2013). Stimulus-Response Tests: An Applied Demonstration. In *Proceedings of IEEE International Conference on Research Challenges in Information Science*, Paris, France. DOI: 10.1109/RCIS.2013.6577740
- Svegliato, J. (January, 2013). The Revival of Reliabilism: A Mathematical Approach to the Generality Problem. *Marist Undergraduate Philosophy Journal*, 1, 18-33.

PROFESSIONAL EXPERIENCE

Goldman Sachs, Jersey City, NJ

Software Developer, Big Data Engineering (July 2015 – April 2016)
- Developed a scalable web application that displays real-time and historical application log data to troubleshoot issues and analyze behavior without requiring host access
- Conducted code reviews with the global team to ensure software quality

Lead Software Developer, Network Software Engineering (July 2014 – July 2015)
- Led the development of a network device bridge that uses a domain-specific language to abstract underlying operating system details
- Created a discovery system that manages a historical configuration inventory of thousands of network devices including firewalls, switches, and routers

Software Developer Intern, Network Software Engineering (May 2012 – May 2014)
- Developed a virtual IP address provisioning service that manages a global and redundant route injection system
- Built an extensible connection framework to support SSH, Telnet, HTTP, and other network protocols

OmniTech, Poughkeepsie, NY

Software Developer (September 2013 – June 2014)
- Developed a load balancing system that distributes energy demand across natural gas engines to minimize fuel consumption using linear and convex optimization
- Built a configurable interface that simulates a redundant network of natural gas engines of different specifications

Marist College, Poughkeepsie, NY

Web Developer, Web Services (November 2010 – May 2012)
- Designed and built the official Marist College desktop and mobile websites
- Developed web applications for the college including an online fashion store, a computer store, a fire extinguisher inventory, an online newsroom, and an event scheduling system

Teaching Assistant, School of Computer Science and Mathematics (July 2011 – August 2011)
- Taught modules on game design and programming using a popular game development environment
- Directed daily lab exercises to help students learn programming concepts and develop their own computer games

SKILLS

- **Languages:** Java, Python, PHP, JavaScript (jQuery/React/Bootstrap/Node.js), SQL, HTML, CSS, Visual Basic, Maple, bash, and LaTeX
  - **Experience with** C++, Haskell, Lisp, Groovy, z/OS Assembly, Objective-C, Perl, and Prolog
- **Applications:** Eclipse, NetBeans, IntelliJ, Git, Apache Subversion, Aqua Data Studio, Paint.NET, Astah Professional, Adobe Photoshop/ImageReady, and Visual Studio
- **Operating Systems:** Windows XP/Vista/7, Mac OS X, and Linux RHEL 4.x/6.x
  - **Experience with** Cisco IOS/NX-OS/CatOS, Citrix NetScaler, Juniper Junos/m10i, Arista, Aruba, Check Point, and z/OS
- **Other:** Proficient in solving Rubik's Cubes; basic knowledge of network hardware and architecture

ACTIVITIES

- Vice President of the Marist College Computer Society
- Runner-up in the Marist College Computer Society's Hackathon
- Commentator at the *2nd Mid-Hudson Undergraduate Philosophy Conference*
- Host of the *4th Mid-Hudson Undergraduate Philosophy Conference*
- Member of the Marist College Philosophy Reading Group
- Member of the Marist College Mathematics Club
- Member of Habitat for Humanity
- Peer mentor of Marist College's Leo Hall Dormitory
- Member of the UMass Amherst New Student Committee
- Member of the UMass Amherst Social Committee
- Steward of the UMass Amherst Graduate Employment Office
- Escuela Delengua Spanish Conversation Course in Granada, Spain