Thomas Manzini
5250 Liberty Ave., Pittsburgh, PA 15224
Email: Tom.M@nzini.com Website: www.nzini.com Cell: 702-324-4319

EDUCATION

Carnegie Mellon University, Pittsburgh, PA
MS - Language Technologies (projected 2018)
Honors: Selected to Dean's Masters Advisory Council – School of Computer Science (2016-present)

Rensselaer Polytechnic Institute, Troy, NY
BS - Computer Science, *Cum Laude* - 2016
Honors: Stanley I. Landgraff '46 Award – Excellence in leadership and academic achievement (2016)
President, Upsilon Pi Epsilon Computer Science Honor Society, NY Eta Chapter (2014-2016)
Phalanx Senior Leadership Honor Society (2015-2016)
Co-Founder, RPI Science Undergraduate Council (2015-2016)
Dean's List (2012, 2013, 2014, 2015, 2016)

RESEARCH EXPERIENCE

Prof. Eric Nyberg, Carnegie Mellon University – Language Technologies Institute, Pittsburgh, PA
Bosch: Ubiquitous Personal Assistant (2016-2017)
- Research published in the *Proceedings of the 18th Annual SIGdial Meeting on Discourse and Dialogue*, August 2017.
- Constructed a sematic parsing methodology for the development of an ubiquitous dialog agent spanning multiple smart home appliances.
- Developed novel approach for collection of crowdsourced data for the construction of semantic parsers.
DARPA: Data Driven Discovery of Models (2017-present)
- Currently constructing a dialog system to allow domain experts to interact with large scale datasets through dialog and data visualizations.

Prof. Alan Black, Carnegie Mellon University – Language Technologies Institute, Pittsburgh, PA
CMU Magnus: Amazon Alexa Prize Team (2016-present)
- Developing a social bot to engage users on Amazon's *Alexa* platform.
- Proposed and developed a community question answering module to perform automated general question answering.
- Developed a dialog state transition model for managing dialog flow over predefined topics.

Prof. James Hendler, Rensselaer Polytechnic Institute – Computer Science Dept., Troy, NY
Syllabub (2015-2016)
- Research published in *Journal of Artificial General Intelligence*, December 2015.
- Proposed, researched, and presented work involving using the *IBM Watson* pipeline and natural language processing (NLP) techniques to solve clues from Syllacrostic puzzles at >95% accuracy.
Debate Me (2016)
- Explored the effectiveness of "skip-thought" neural models for use in dialog agents.
- Collected and curated a corpus of presidential debate transcripts in order to train models.
Jeopardy! Reversed (2014-2015)
- Utilized NLP techniques to automatically generate *Jeopardy!* questions based on song lyrics.

Prof. Mei Si, Rensselaer Polytechnic Institute – Cognitive Science Dept., Troy, NY
RPI Social Robotics (2013-2014)
- Developed an interactive dialogue driven campus tour guide for use on a *RoboKind Zeno* robot.
Lost Manuscript II (2013)
- Contributed to the development of an interactive story for players to practice Chinese speaking skills with virtual agents.

Prof. Ananda Gunawardena, Carnegie Mellon University – School of Computer Science, Pittsburgh, PA
Classroom Salon research project (summer 2011)

PUBLICATIONS

Manzini & Ravichander et al. 2017. How would you say it? Eliciting lexically diverse dialogue for supervised semantic parsing. In *Proceedings of the 18th Annual SIGdial Meeting on Discourse and Dialogue*. Association for Computational Linguistics, Saarbrcken, Germany, pages 374–383.

Manzini et al. 2015. A Play on Words: Using Cognitive Computing as a Basis for AI Solvers in *Word Puzzles. Computational Creativity, Concept Invention, and General Intelligence Issue. Journal of Artificial General Intelligence*. 6(1) pages 111-129.

EMPLOYMENT

Pinterest, San Francisco, CA
>   Intern – Software Engineer, Ads Ranking Team (summer 2016)
>   - Developed an automated data workflow for processing large scale refunds for advertisers who are billed through both credit cards and invoices.
>   - Data workflow written in the Hive query language and Python.

LinkedIn, Mountain View, CA
>   Intern – Software Engineer, Digits – Growth and Lifecycle Team (summer 2015)
>   - Developed backend Hadoop flow for phone collection splash screen and desktop banner.
>   - Developed parallelizable backend code in Java to map LinkedIn user names to phone numbers for name checking during an address book import.

Bloomberg L.P., New York, NY
>   Consultant – Software Engineer, Fixed Income – Relative Value/Search Team (fall 2014-spring 2015)
>   - Invited to become part-time consultant to continue work following summer internship.
>   Intern – Software Engineer, Fixed Income – Relative Value/Search Team (summer 2014)
>   - Primary fixed income project selected for presentation to Bloomberg Co-Founder, Thomas Secunda.
>   - Secondary fixed income project selected for presentation to Michael Bloomberg.
>   - Developed Advanced Data Analysis, a pivot table toolset for performing "groupbys" and aggregations on all fixed income securities using Python and Cython.

Hover Inc., Los Altos, CA
>   Intern – Software Engineer, The Prometheus Project (summer 2013)
>   - Developed heat map based point cloud visualization module in Python.
>   - Translated code from C++ to Python for "Moneyshot" visualization.

MGM Resorts International, Las Vegas, NV
>   Intern – Software Engineer, Multi-Media Department (summer 2012)

Microsoft Innovation Center/Linq360, Las Vegas, NV
>   Intern – Information Technology Department (summer 2011)

VOLUNTEER & COMMUNITY SERVICE

Edgewood Fire Department, Pittsburgh, PA (2017-present)
Carnegie Mellon University Emergency Medical Services, Pittsburgh, PA (2016-present)
Rensselaer Polytechnic Institute Ambulance, Troy, NY (2012-2016)
>   Captain (Elected 2014-2016), Training Committee Chair (2014), Scheduling Coordinator (2012)
>   - Held the ranks of: Crew Chief Trainer, Driver Trainer, Event EMS Supervisor, Duty Supervisor

Rensselaer Polytechnic Institute Science Ambassadors, Troy, NY (2014-2016)
>   Selected to present STEM topics to middle and high school students in the NY Capital Region.

President's Lifetime Achievement Award (2015) - Awarded by President Obama for over 4,000 hours service.

CERTIFICATIONS

AHA CPR for Basic Life Support Providers (Valid 2012-2018)
VFIS Emergency Vehicle Operator Certification (Valid 2016-2019)
PA Fire Fighter 1-NFPA 1001, Certification Number: 22382 (Valid 2017-ongoing)
PA Emergency Medical Technician–Basic, Certification Number: 229502 (Valid 2017-2019)
NY Emergency Medical Technician–Basic, Certification Number: 407938 (Valid 2013-2019)
SSI Stress and Rescue SCUBA Diver, Certification Number: 801196F4672433767323-US (Valid 2016-ongoing)