Vittorio Perera

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WORK EXPERIENCES

Lead Member of Technical Staff
Salesforce, Inc. San Francisco, California, US
Enable voice interaction for Agentforce. Integrate the technology developed at Tenyx into Salesforce existing stack to deliver a fully configurable voice assistant to all the existing Salesforce customers.
Date: September 2024 - Present

Founding Machine Learning Engineer
Tenyx, Inc. Palo Alto, California, US
Realized the initial idea of a voice agent natively powered by LLMs into a product serving hundreds of calls every day. De-risked initial technology. Built first POC and developed it into a full-fledged product. Deployed and maintained Tenyx voice agents to serve live traffic.
Date: July 2022 - September 2024

Applied Scientist
Amazon – Lab 126 Sunnyvale, California, US
Developed a deep learning-based approach to dialog management empowering developers to create natural, human-like voice experiences on Alexa. Trained and evaluated generative model enabling the automated generation of Alexa prompts, lifting the need for human authored inputs.
Date: November 2018 - June 2022

Applied Scientist Intern
Amazon – Lab 126 Sunnyvale, California, US
Improved the ability for the Alexa voice assistant to understand and fulfill users' requests. Designed, trained and evaluated deep-learning models to parse users' utterances into a structured representation, the Alexa Meaning Representation Language (AMRL).
Date: May - August 2017

Research Summer Intern
IBM T.J. Watson Research Center Yorktown Heights, New York, US
Developed a multi-modal interface for a Pepper Robot to act as concierge for the Watson Research Center. Connected the robot with several IBM services (e.g., speech and face recognition), designed the robot dialog model, and developed a web interface to be displayed on the robot chest tablet.
Date: May - August 2016

EDUCATION

Carnegie Mellon University Pittsburgh, Pennsylvania, US
Ph.D. in Computer Science (2018)
Thesis Title: *"Language-Based Bidirectional Human and Robot Interaction Learning for Mobile Service Robots"*
Advisor: Manuela Veloso

Sapienza University Rome, Italy
M.Sc. in Artificial Intelligence and Robotics (2013)
Thesis Title: *"Talking Robots: Voice User Interfaces For Human-Robot Interaction."*
Final Grade: 110/110 *cum laude*

Sapienza University Rome, Italy
B.E. in Computer Engineering (2009)
Thesis Title: *"Parsing and Analysis of Medical Prescriptions"*
Final Grade: 101/110

SELECTED PUBLICATIONS

Schema-Guided Natural Language Generation
Authors: Yuheng Du, Shereen Oraby, Vittorio Perera, Minmin Shen, Anjali Narayan-Chen, Tagyoung Chung, Anu Venkatesh, Dilek Hakkani-Tur
Proceedings of the 13th International Conference on Natural Language Generation (INLG), 2020

Multi-Task Learning For Parsing The Alexa Meaning Representation Language
Authors: Vittorio Perera, Tagyoung Chung, Thomas Kollar, Emma Strubell.
Proceedings of the AAAI Conference on Artificial Intelligence, 2018

Learning to Understand Questions on the Task History of a Service Robot
Authors: Vittorio Perera, Manuela Veloso
IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2017

Dynamic Generation and Refinement of Robot Verbalization
Authors: Vittorio Perera, Sai Prabhakar Selveraj, Stephanie Rosenthal, Manuela Veloso
IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2016

Learning Task-Relevant Environmental Knowledge from Human-Robot Dialog and the Web
Authors: Thomas Kollar, Robin Soetens, Vittorio Perera, Mehdi Samadi, Yichao Sun, Daniele Nardi, René van de Molengraft, Manuela Veloso
Robotics, 2015

Learning Environmental Knowledge from Task-Based Human-Robot Dialog
Authors: Thomas Kollar, Vittorio Perera, Daniele Nardi, Manuela Veloso
International Conference on Robotics and Automation, 2013

OTHER RESEARCH EXPERIENCES

Speaky For Robots
Speaky for Robot was a project funded by the European Community, led by professor Daniele Nardi. The goal was to foster the definition and deployment of voice user interfaces in robotic applications where human-robot interaction is required.
`http://www.echord.info/wikis/website/speaky`

LANGUAGES

Italian - Native
English - Fluent
French - Intermediate