

Gennaro Frazzingaro

Sr. Engineering Manager

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Technical Skills

Objective-C • Swift • JS • TypeScript

C • C++ • Java • Kotlin

Python • Scala

Education

MS, Computer Science (GPA equiv: 3.8)

Specialization: Artificial Intelligence

University of Calabria

2007 - 2010 | Calabria, Italy

BS, Computer Science (GPA equiv: 4.0)

University of Calabria

2004 - 2007 | Calabria, Italy

Patents

Co-inventor of P38048USP1

Accessing Multiple Domains Across Multiple Devices For Candidate Responses.

Apple Inc., Mar 2018.

Co-inventor of P33966US1

Feedback Analysis of a Digital Assistant.

Apple Inc., Aug 2017.

Co-inventor of P34063US1

Synchronization and Task Delegation of a Digital Assistant.

Apple Inc., Jun 2017.

Co-inventor of P34373US1

Optimizing Dialogue Policy Decisions for Digital Assistants Using Implicit Feedback.

Apple Inc., Jan 2017.

Awards

Summa cum laude

Awarded to the top students in their final year of a Masters degree.

University of Calabria, 2010.

Summa cum laude

Awarded to the top students in their final year of a Bachelor degree.

University of Calabria, 2007.

March 2019 - **Sr. Engineering Manager, Health**

Apple Inc.

Present

Managing the Clinical Health Insights team, whose responsibility include:

- Download of Clinical Health Records from major US hospitals in the Health iOS App via FHIR endpoints, preserving the user's privacy.
- Better understanding and reasoning upon CHRs using the Apple Medical Ontology.

Jul 2017 -
March 2019

Sr. Engineering Technical Manager, Siri

Apple Inc.

Managing the Siri Distributed Platform team, whose responsibility include:

- Offline Siri support for a subset of domains
- Siri's portable runtime, coordinating SiriKit and non-SiriKit integration points both on server and iOS, watchOS, and macOS.
- Improve Siri's reliability, performance, on lower end devices.

Jan 2015 -
Jul 2017

Sr. Software Engineer / Tech Lead, Siri

Apple Inc.

Senior staff member of the Siri Platform team. Leading the development of features focused on Privacy and Personalization, and mentoring several junior engineers. Large cross-functional work within the company.

- Built the iOS platform to perform on-device analysis of user engagement with Siri's requests, respecting the user's privacy. Later extended to capture engagement with other non-Siri features. Patented.
- Led the cross-functional work at Apple to collect user engagement, use feedback to replace manual grading, and promote Reinforcement Learning. Patented.
- Built the first Siri user profile on-device (shared over iCloud keychain), with the objective to deliver personalized Siri user experiences. Patented.
- Built a platform for a Siri server to arbitrary code on user's devices while idle. Patented.
- Built the platform to promote Siri's functionalities in response to specific user behavior. Increased engagement with some features between 5% and 70%.

Mar 2012 -
Jan 2015

Sr. Tools Engineering / Technical Manager, Siri

Apple Inc.

- Built and led a team of 4 tool developers, using bleeding-edge technologies (Node.js, Mongo, Elastic, Angular) and promoted Agile Methodologies, including CI, CD, and TDD.
- Re-defined the process for creating Siri's use cases through the inception of new ML pipelines, developer tools, and a brand new CMS as a design / documentation tool.
- Evangelized new toolset with designers Siri designers, Siri Operations, Security, Siri ASR and NLP and other ML Teams.
- Evangelized new toolset with Siri QA, so that the content powering ML models translates into functional tests, and linked to the documentation in the CMS.
- Reduced creation of a Siri use case from weeks to less than 24h.
- Built tools to allow non-technical content creators to deploy Siri responses to production, allowing Marketing, Legal and Design teams to quickly sign-off.
- Re-defined the programming language to code Siri responses, and the toolset to easily preview them (permutations over a declarative language).

Sep 2009 -
Mar 2012

Software Engineer, Core Localization Technologies

Apple Inc.

- Responsible for the Italian Localization of the first iPad.
- Helped build the toolset to streamline the process of localizing Siri in 4+ languages, allowing it to scale to over 30 languages supported.
- Built a framework for "language generation", exploding GFGs into set of exemplars to train statistical models.
- Built a rule-based system to learn GFGs from POS-tagged exemplars.
- Built content management system for "terminology memory", to define a cross-language glossary of Apple translations, and systematically leverage previously translation of specific terms across translation units.

Feb 2009 -
Jul 2009

Intern, Localization Engineering

Apple Inc.

Mar 2007 -
Sep 2007

Intern Researcher

DERI Galway, Ireland

Member of the Semantic Web research group, working on a query solver for the Semantic Web using non-monotonic reasoning over RDF resources.