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 - Present — **Sr. Engineering Manager, Clinical Health Insights** — Apple Inc.

Managing and growing a team of 5 engineers, whose responsibility include:
- Developing the platform to download both clinical records from your medical institution, and in-house curated ontology of medical terms derived from SNOMED, LOINC, and others, to the user.
- Enabling charting of etherogenosly coded/labeled records together, and the understanding of drug-drug interactions.
- Laying the groundwork for on-device ML-based predictions over health data.

Jul 2017 - March 2019 — **Sr. Engineering Manager, Siri Distributed Platform** — Apple Inc.

Managed a team of 8 engineers, grew the team from 6 to 8, mentored engineers to take leadership roles in key areas, such as:
- Supporting on-device execution to enable better performance, privacy, and personalization of Siri responses, without any loss in developer agility.
- Improving Siri's performance on slower devices, up to 4s faster.
- Making Siri 100% reliable for a subset of domains, by supporting offline execution.

Jan 2015 - Jul 2017 — **Sr. Software Engineer, Siri Platform** — Apple Inc.

Senior staff member of the Siri Platform team. Led the development of several features focused on privacy and personalization, and mentored junior engineers. Led large cross-functional projects across different organizations at Apple.
- *Siri Tips*: increased usage of poorly discoverable Siri features (between 5% and 70% increase in daily usage), by promoting them alongside related Siri responses.
- Built the platform to perform on-device analysis of engagement with Siri's responses, without leaking any information about the user. *Patented*.
- Closed the feedback loop for such implicit user corrections to train ML models. Increased overall accuracy for en-US, by amost 10%.
- 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 execute arbitrary code on user's devices while idle. *Patented*.

Mar 2012 - Jan 2015 — **Software Engineering Manager, Siri Developer Tools** — Apple Inc.

- Built and led a team of 4 junior engineers, promoted Agile Methodologies both withing the team and in Siri.
- Reduced creation of a Siri use case from weeks to less than 24h, through a set of new tools to create Siri's use cases from scratch, and supported the move from rule-based NLP to an ML-based system.
- Helped re-define content workflow for designers, ML developers and QA, enabling seemless translation of design into implementation, then into functional testing.
- Built tools to allow non-technical content creators to deploy Siri responses to production in less than a day, allowing Marketing, Legal and Design teams to quickly sign-off on what was pushed to production.
- Member of the working group in charge of redefining the programming language to code Siri responses, working on 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. Built the toolset to improve the agility of localizing and testing Siri, from 5 languages to 30+ languages.
- Built framework for "language generation", exploding GFGs into set of examplars to train statistical models.
- Built rule-based system to learn GFGs from POS-tagged exemplars.
- Built a CMS for "terminology memory", to define a cross-language glossary of Apple translations, and sistematically 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 using non-monotonic reasoning over RDF resources.