

# MARCO SCARLATA

 [linkedin.com/in/marco-scarlata](https://www.linkedin.com/in/marco-scarlata) |  [github.com/mscarla2](https://github.com/mscarla2)

## SKILLS

**Languages :** C++, Python, Kotlin, Java, JavaScript

**Frameworks:** gRPC, Protocol Buffers, Flask, Django, React, Svelte

**Libraries/Tools:** Tensorflow, TFLite, Keras, Pandas, NumPy, SQL, Git, HTML/CSS, Bazel/Blaze, BigQuery

## EXPERIENCE

### Google | Software Engineer

Mountain View, CA

*WatchSW AI/ML & Algorithms*

*Sep 2022 – Present*

- Productionized a novel, low-power ML gesture recognition algorithm (**C++**, **Python**, **TFLite**) for wearables, partnering with a Research Scientist to lead end-to-end integration, on-device optimization, and sensor fusion (IMU & physiological signals); achieved over **92% accuracy**, **1ms inference**, and **<250ms E2E latency**. Led full feature integration to production, managing critical bug triage, P0 regressions, and off/online parity.
- Owned and optimized the Low Latency Off-body Detection (LLOB) algorithm – a core component for most algorithms and system performance – resolving false detections and power regressions, raising reliability across all shipped devices.
- Designed a **hardware abstraction layer** and **low-power MCU modality** for the gesture detection stack as part of platformization efforts to support broader OEM adoption.
- Prototyped and modeled improvements for the **Auto Bedtime Mode** algorithm to reduce transition latency, performing early-stage feature modeling with a Research Scientist.
- Implemented on-device telemetry and ETL dashboards; led Gestures and LLOB bug triage, closing **1000+ bugs**.
- Mentored teammates on sensor integration and MCU-level development; led design reviews and authored the *"MCU-based Practical Telemetry Guide"* referenced by **24+ engineers**.

*Cloud Asset Inventory & Search*

- Productionized a scalable C++ solution to enrich Cloud Asset Inventory with structured metadata for cloud-managed assets, impacting **90%+** of GCP resources and boosting adoption to **500,000+** active users.
- Enabled launch of Asset Enrichment in the Asset Query System (**C++**, **SQL**, **Spanner**), powering efficient queries across **275+** GCP asset types for SCC customers.
- Drove cross-team optimization of a workflow runner (**gRPC**, **Borg**, **Python**), reducing development time by **25%** resulting in **10 SWE weeks** saved.

### OpenSesame | Software Engineering Intern

Portland, OR

*Front-End Division*

*Jun 2020 – Aug 2020*

- Enhanced course language selection with searchable dropdowns (**Angular**, **TypeScript**); built and ported 10+ end-to-end tests from **Drupal** to **Angular/Selenium**, expanding QA coverage
- Resolved 6+ sprint bugs—including a critical IE landing page issue—by extrapolating burn-down processes and strengthening test automation with Behat API, and unit tests

### ANDSystems | Machine Learning Intern

Ulaanbaatar, Mongolia

*Machine Learning Team*

*Jun 2019 – Aug 2019*

- Analyzed the purchase history of **100,000+** users buying coupons by regression analysis using **Python**, **Pandas**, **NumPy**, and **PyTorch**, identifying an under-marketed sector in sales that increased revenue by 10%
- Launched an MVP module-based recommender system with caching for an e-commerce platform (*BananaMall*) with 10,000+ downloads on the Playstore and 100,000+ users, using **Python**, **SKLearn**, and **DynamoDB**

### University of Rochester | Teaching Assistant & CETL Tutor

Rochester, NY

*Computer Science Department*

*Sep 2019 – Dec 2021*

- Taught students in *Web Programming*, *Data Structures & Algorithms*, and *Formal System & Computations* courses
- Conducted tutoring sessions with 15+ college students, resulting in a 30% increase in their respective course grades

## EDUCATION

### University of Rochester

Rochester, NY

*Bachelors in Computer Science | Minor in Psychology*

*Aug 2018 – May 2022*

- **Major GPA:** 3.5/4.0 – Consecutive Dean's List Recipient
- **Relevant Courses:** Data Structures & Algorithms | Formal Systems & Computation | Web Programming | Human Computer Interaction | Intro to Artificial Intelligence | Database Systems | Natural Language Processing |
- Dean's Scholarship & Rochester National Grant Awardee

## PUBLICATIONS

- **A small-molecule allosteric inhibitor of BAX protects against doxorubicin-induced cardiomyopathy.** *Nature Cancer*, 2020. Contributing author – implemented data-processing scripts and statistical analysis.