

# Erik Gomez

github.com/erikchomez  
erikgomez.me

Email : unierikgomez@gmail.com

Mobile : 310-460-9747

## TECHNICAL SKILLS

---

- **Languages:** Java, Python, SQL, Typescript, C++, C
- **Frameworks and Libraries:** Angular, JUnit, Mockito, Numpy, OpenCV, MySQL, PostgreSQL, SciPy, Spring
- **Tools:** CI/CD, Git, Jenkins, Jira, JProfiler, JDK Mission Control, Maven

## WORK EXPERIENCE

---

- **VMware** Palo Alto, CA  
*Software Engineer 2* *Feb 2022 - Present*
  - Maintained and supported VCF, a distributed Java application with over 1 million lines of code, using Maven, PostgreSQL, and Spring.
  - Designed and implemented Jenkins CI pipelines to automate integration testing. Achieved an 80% increase in productivity and efficiency by streamlining the integration testing process through automation.
  - Leveraged JProfiler and JMC to identify high memory and CPU usage workflows in scale environments. Implemented a redesigned frugal locking algorithm resulting in up to a 95% reduction in overhead.
  - Refactored legacy code to create an extensible feature, enabling dynamic addition of specific modules. Improved client-side and database memory performance by up to 65% through code optimization and refactoring.
  - Led the planning and development of customer-facing early access documentation for new functionality hidden behind a feature flag. Collaborated with product managers and IX team to deliver high-quality documentation accessible to over 10,000 customers.

## PROJECTS

---

- **TheRealFarmerJohn**  
*Full Stack Developer*
  - Collaborated with a team to build a reinforcement learning project using Project Malmö.
  - Designed and implemented an algorithm for generating XML schema used in Minecraft terrain generation.
  - Implemented Proximal Policy Optimization and a curriculum-based learning to train specific individual skills, allowing the agent to link these learned behaviors together to optimize the end goal of harvesting wheat.
- **3D Object Reconstruction**  
*Backend Developer*
  - Developed a pipeline for producing high-quality 3D reconstruction of an object from a collection of structured light scans.
  - Generated object mesh using OpenCV, Numpy, and triangulation of matching pairs of points. Applied a combination of mesh smoothing algorithms using Numpy and SciPy to clean up meshes.
  - Visualized 3D object reconstruction in MeshLab by combining clean meshes for each light scan. Utilized built-in Poisson Reconstruction to smooth out any remaining imperfections.

## EDUCATION

---

- **University of California, Irvine** Irvine, CA  
*Bachelor of Science in Computer Science* *Sept. 2018 - Dec. 2021*

## VOLUNTEER EXPERIENCE

---

- **San Jose Public Library** San Jose, CA  
*Volunteer* *Feb 2022 - August 2022*
  - Supported adult learner's goal to improve their basic reading, writing, and technology skills by planning structured lesson plans.
  - Advised and encouraged mentee in writing two stories that were published in a bi-annual short story publication by the San Jose Public Library.