

Mauricio Gomez Aguinaga

Staff Software Engineer

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Experience

General Motors – Staff Software Engineer

2024 - Today

Creating a state of the art pipeline for 3D assets for all use visualization needs our brands might have. Work includes a custom editor based on Unreal Engine to set up scenes, a comprehensive pipeline to optimize assets for the web, as well as a series of extensible players for different uses cases (Web, Mobile, etc). Tech leading a team of 20+ engineers across 4 different teams.

Google – Staff Software Engineer - Tech Lead Manager

2023 - 2024

My team developed a state of the art tests management system for all Pixel devices. We specialized on infrastructure for distributed long standing stability tests running over 10k hours. I managed a team of 5 people across Taiwan and Mountain View.

Netflix – Senior Software Engineer

2021 - 2022

We developed the next-generation distributed animation pipeline to support thousands of artists worldwide. My team developed a web-based Asset Management System to track assets across the pipeline, assign tasks to artists, and the ability to access them locally in just one click. We also created a new service to author working contexts based on Rez.

Uber – Lead Software Engineer

2018 - 2021

Led the 3D visualization suite for Robot Studio for our self-driving cars. Most of my work includes robotics visualizations using Deck.gl, React, Xviz, protobuf and gRPC. I also contributed to the backend to address data serialization and transport performance issues. I also led the front end for Ad Tech Team, where I grew the team from 1 to 7 full-time employees and up to 10 contractors across 4 different geographies. We worked on projects like: City Guides, Machine Learning Marketing Budget Allocation and Uber Marketing Services (UberEats Ads, Car Top Ads, etc).

Groupon – Senior Software Engineer

2013 - 2016

Worked on the Point of Sale for the iPad for Groupon Merchants: [Breadcrumb](#). I implemented the enterprise level reporting suite, migrated our administration portal into a reactive JavaScript app and implemented a native [iPhone App](#) for real time reporting.

Walt Disney Animation Studios - Technical Director

2011 - 2013

Developed and improved the assets pipeline and created tools to assist the studio in content creation for feature films like [Frozen](#), [Wreck it Ralph](#), among others. My main projects involved creating a system to monitor render farm utilization, a user interface for publishing assets and a particle based Snow Painting Tool.

Advanced Graphics Labs, University of New Mexico - Research Assistant

2009 - 2011

Research and development of high-end Computer Graphics algorithms and applications. Including Interactive techniques for Rendering in a Dome, Route Maps Visualization using the Moiré Effect, Interactive Projective Texture Mapping to provide new textures to user bodies, Binocular Stereo Reconstruction and Haptic Rendering.

Personal Projects

OBD Python

An open source, transactional, object oriented python wrapper on top of serial communications over the OBD II port that allow you full access to all of your car computers (ECU).

Touch Shaders

Geometry reconstruction using the horizontal disparity map from a binocular image. The scene then is rendered in a 3D screen and was able to be touched by a haptic device. My system includes shading framework that allows to paint touch textures on top of geometry so the haptic device reacts differently when it is in contact with different parts of the virtual objects.

Education

University of New Mexico

2009 - 2011

Master's in Computer Engineering with emphasis in Computer Graphics
Advisor: Pradeep Sen

Tecnológico de Monterrey (Monterrey Institute of Technology)

2004 - 2008

Bachelor's in Computer Science

Skills

Programming Languages: *JavaScript, TypeScript, Ruby and Python. Previous experience with C/C++ and Java.*

Libraries, APIs & Languages: *React, Apollo, GraphQL, Rails, Django, QT, iPhone SDK, SQL.*

Software: *Visual Studio Code, Maya, Git, Xcode, Adobe Creative Suite, Terraform, Ansible.*

Languages: *English and Spanish.*

Certifications

- Object Oriented Modeling on Rational – RT011.
- Sun Certified Java Programmer for Java (SCJP).
- IBM Certified Database Associate – DB2 (000-730).
- Cisco Certified Network Associate.
- Maya Dynamics and Simulation.