

# Shu Ma

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## INTRODUCTION

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Have 7 years Full stack development experience and 2 years computer vision experience. Looking for full-time opportunities as a software engineer or software testing.

## SKILLS

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Programming Languages: Python, Java, JavaScript, PHP, Kotlin, C/C++, MATLAB, HTML, CSS

Open Sources: GraphQL, React, OpenCV, Pytorch, PCL

Databases: SQL Server, MySQL, MongoDB

Tools: Git, Android Studio, Visual Studio, Eclipse, BitBucket, Octave

Platforms: Linux, Ubuntu, AWS

## EXPERIENCE

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### **Meta Platforms Inc.**

09/2019 - present

*Full Stack Software Engineer in Menlo Park, CA*

#### **VR Privacy Foundation**

Targeting on developing Oculus customer facing privacy and Oculus privacy foundation.

- Created the lineage system for VR privacy to track upstream and downstream data, improved the lineage system by parsing presto query to fix the row-level issue;
- Developed Data Diagnostic & Alert System to monitor data assets and pipelines for Oculus;

#### **Business Inbox Experience**

Targeting on the growth of the product usage and potential business users by adding or improving business inbox features.

- Laid the foundation for onboarding within Inbox from backend to the UI on web client side;
- Refreshed automation reply setting page with all the automated reply cases;
- Added priority message icon, saved reply and saved reply shortcut feature on inbox Android.

#### **WhatsApp Multiple Device Infra**

Focusing on WhatsApp migration to a Multi-Device architecture and App state sync on Multi-Devices.

- Worked on multiple devices login new experiences like login/logout security notification and add/remove device notification including self device notification;
- Worked on cross platforms sync information among multiple devices including message starring, chat pin/mute, security setting and contact address book.

#### **Messenger Connections Discovery**

A mobile team constantly pushes the boundaries of the user experience across all brand apps, including Messenger, Facebook, Instagram, WhatsApp.

- Delivered a new accessibility feature "Active Status color filter" for Messenger Android where the most common forms of Colour Vision Deficiency can be selected to help a user easily differentiate between online/offline statuses;
- Brought close connections in Facebook Active Now tray on Android, when the user has active status setting off to increase users' engagement.

**Polynesian Exploration Inc.**

03/2018 - 06/2019

Full Time Software Engineer in San Jose, CA

**An OpenCV based visual odometry project for car tracking**

- Implemented the visual odometry algorithm on both raspberry pi and Nvidia Jetson TX2 platforms to detect the car’s motion with images input taken by stereo camera, and promoted the execution time of ORB and KNN match with GPU.

**Integration of the visual odometry with navigation system**

- Built a pair of stereo cameras with GPIO timestamp and synchronized the stereo camera timestamp with the current navigation system which sends a pulse to make the stereo camera capture images.

**Priza Technologies Inc.**

05/2017 - 03/2018

Full Time Research Engineer in Milpitas, CA

**An OpenCV based gaze tracking for augmented reality**

- Used a webcam to capture the center of eyes based on a simple image gradient-based eye center algorithm and mapping the eyes center location with the real world 3D location.

**Camera based 3D merge and features matching**

- Used stereo cameras to create 3D images and match key points captured by ORB from the real object to key points from the projected 3D image with FLANN, identified the 3D coordinates of it with Kinect.

**Camera calibration and point cloud visualization**

- Implemented visualization of the 3D point cloud generated by stereo cameras with PCL, found normal vectors and meshed around the point cloud, visualized and tracked the point cloud using a ray tracing library.

**EDUCATION**

**Georgia Institute of Technology**

08/2014 – 12/2016

-M.S. in Computational Science and Engineering

**Huazhong University of Science and Technology, Wuhan, China**

09/2008 - 06/2015

-M.S. & B.S. in Engineering

**PERSONAL WEBSITES**

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