

# Pojui(Ray) Chen

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<http://pojuichen.com>

## EDUCATION

**Georgia Institute of Technology** 2012 - 2014  
MS in Digital Media, GPA: 4.00/4.00

**National Taiwan University** 2007 - 2011  
BBA in Information Management, GPA: 3.78/4.00

## SKILLS & TOOLS

### Research Area

Augmented Reality, 3D Web Programming, Realtime Body Tracking, Gesture Recognition, Computer Graphics (WebGL), Depth Camera Processing, WebSocket and Tangible Interaction

### Programming Languages

JavaScript ES5/ES6, C, C++, Shell Script, Python

### Tools

Unreal Engine 4, CLion, GNU Toolchain, NodeJS, ThreeJS, Electron, Jenkins

### Author

Panolens.js

## HONORS & AWARDS

**Best Paper Honorable Mention, ASC 2016** 2016  
Propose an augmented panoramic environment method for building information on construction site

**eBay Intern Recognition, EBAY** 2013  
Intern project "eBay Now Kiosk" is one of the two recognized projects and called out at intern conference among 500+ projects

**Third Place, May 2013 Dev Derby Challenge, MOZILLA** 2013  
Create an immersive web-based application using WebRTC/getUserMedia for face tracking and Three.js for 3D environment

**First Place, Hackathon 2013, EBAY** 2013  
Create an interactive 3D web application which enhances cost-sharing in local areas, 24-hour Hackathon using Milo API for location-based merchants

**President Award, Department of Information Management NTU** 2011  
GPA in top 5% of students in IM department

**First Place, Samsung Anycall Dreamers, SAMSUNG** 2010  
Champion out of 6 teams that teamed up from last 30 participants (out of 300+) in 3rd round selection. One of the delegation team to Samsung Korea on behalf of Taiwan.

## WORK EXPERIENCE

**Director of Product Engineering** 2016 Oct – present  
YOUSPACE

- Lead software engineering team from research prototyping to production-ready products
- Develop and maintain SDK for JavaScript / C / Unreal Engine 4
- Build JavaScript API using binary websocket and web workers to enable real-time point cloud data
- Optimize JavaScript API by lowering 70% of memory consumption and increasing parsing speed to 300%
- Optimize Unreal Engine 4 API with async event delegation systems in C++ and expose data to Blueprint
- Design and develop 30+ internal demos and 8 public applications for inspirations and clients
- Architect and maintain infrastructure to support scalable software product and services
- Develop a custom Linux OS (YSOS) based on minimal Ubuntu 16.04
- Establish a private APT repository using AWS S3 for staging and production distribution
- Create an on-boarding application to guide first time user through wifi setup and auto-calibration
- Setup automated continuous integration from unit testing, coverage report, packaging and distribution

**Software Engineer, Core Apps** 2015 Oct – 2016 Oct  
DAQRI

- Architect hybrid (native and web) core applications on Daqri Smart Helmet

## PUBLICATIONS

**Integrating BIM and Panorama to Create a Semi-Augmented-Reality Experience of a Construction Site**  
Journal of Construction Education and Research, Volume 12, 2016 - Issue 4, 2016 ([permalink](#))

### An Augmented Panoramic Environment to Access Building Information on a Construction Site

Technical paper, ASC, Proceedings of 52th Annual International Conference of the Associated Schools of Construction, 2016

### BIM2MAR: An Efficient BIM Translation to Mobile Augmented Reality Applications

Journal of Management in Engineering, ASCE, Information and Communication Technology (ICT) in AEC, 2014 ([permalink](#))

### SciSketch: a tabletop collaborative sketching system

Technical paper, ACM, Proceedings of the 8th International Conference on Tangible, Embedded and Embodied Interaction, 2014 ([permalink](#))

- Prototype 3D UI / UX for stereoscopic display on Daqri Smart Helmet
- Create a WebGL-based visual inertial navigation rendering / authoring system
- Build data visualization using inertial navigation system tracking data
- Build a 3D environmental feedback shader (rippling effect) in post-tracking data analysis
- Awarded 3 times for employee contributions
- Publish one ASC journal with professors from academia

**Design Engineer, Retail Innovation**  
EBAY

2014 July – 2015 Oct

- Create smart fitting rooms for Rebecca Minkoff physical store, quoted as being the “single biggest advance in retail since the Apple Store.” Covered by 120+ articles (including [WSJ](#) and [Forbes](#))
- Prototyping peripheral products using RFID reader and NFC payment systems
- Develop front-end and back-end services for Rebecca Minkoff and Nordstrom physical stores
- Design, develop and propose omni-channel solutions to retailers

**Graduate Research Assistant**  
GEORGIA TECH

2012 Oct – 2014 Apr

- Develop a method and workflow for Building Information Model (BIM) translation to Mobile Augmented Reality (MAR)-based environment accessible through current mobile technologies
- Construct data filters based on user-centered information for Architecture, Engineering, and Construction (AEC) practitioners

**Intern, Innovation Research**  
EBAY

2013 May – 2013 Aug

- Apply emerging web technologies to create an engaging experience on eBay Now
- Create a friction-less interaction between any mobile device with touch screen kiosks
- Selected the top two projects among 500+ interns globally

**Director of General**  
YOUTH OF MONTE JADE SCIENCE AND TECHNOLOGY ASSOCIATION

2011 July – 2012 Aug

- Assist to organize 5 industrial conferences with topics on Organics, Healthcare, eBook, Finance, and Cross-Strait Issues
- Write conference summaries for Monte Jade Periodicals
- Lead a team of 14 members to organize 3 major student events, with more than 200 college students involved

**Mobile Application Developer**  
SAMSUNG

2011 Oct – 2012 May

- Design and develop 3 mobile applications for Android and Bada OS
  - Love Match: Android 2.2/ Java (7,000+ downloads, the only officially supported Chinese application)
  - Taipei Transit: Bada / C++ (Top1 most popular application for 4 weeks in Samsung App Store)
  - Kaohsiung Transit: Bada / C++ (5-star rating)