

# ROBERT AL ZHOU

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(929) 900-6337

## EXPERIENCE

May 2015 – Present  
Philadelphia, PA

### University of Pennsylvania | Research Assistant

- Created simple tools and interactive web documentation for the layperson to get started with the keyboard for UI testing
- Improved a Unity-based keyboard interface that enables typing without visual cues, allowing faster typing while in virtual or augmented reality
- Researched high performance methods for camera object tracking on mobile phones

Aug 2016 – Dec 2016  
Philadelphia, PA

### University of Pennsylvania | Teaching Assistant

- Wrote scripts to automate homework submission from 60+ students
- Completely revised outdated course materials on mocap and computer animation
- Learned and taught new motion capture software

Aug 2015 – Oct 2015  
Remote

### Autodesk | Assistant Animator

- Supported the lead animator with model retopologies, character animations, and file conversions

Jun 2014 – Aug 2014  
Philadelphia, PA

### ROAR for Good | Software Engineering Intern

- Developed multiple user interfaces for easy data manipulation and statistical analysis

Jun 2013 – Aug 2013  
Philadelphia, PA

### SnipSnap | Software Engineering Intern

- Updated the administrative website to allow bulk data manipulation, saving time and tedium for its operators

## EDUCATION

Aug 2014 – May 2017  
Philadelphia, PA

### University of Pennsylvania

*BSE Digital Media Design, GPA 3.68/4.00*

- Related Coursework: Computer Graphics; Computer Animation; Physically Based Animation, Advanced 3D Modeling; Computer Systems; Networks and Security

Aug 2013 – May 2014  
New York, NY

### New York University

*BA Computer Science*

## PROJECTS

Sep 2016 – Present

### Automatic Skeletonization | Maya Plugin

- Implemented a Maya plugin that analyzes a given mesh to determine the optimal placement of bones using recent research in computer vision
- Provides an automated way to skeletonize complex and tedious characters and props
- Includes the first public robust convex hull plugin for Maya, which can be used for game engines and other tools

Dec 2016

### Pigeon | Maya Rig

- Modeled and rigged a realistic pigeon with layered wing feather control and IK toe lift
- Includes a wing fold SDK with wing bending and individual feather tweak controls

Apr 2016

### Melvin | Maya Rig

- Modeled and rigged a character with bendy limbs and joint volume preservation
- Skinning only required minimal corrective shapes with the character's relatively large chest and arms

## SKILLS

Languages

C++, Python, C#, JavaScript, Bash/Linux

Tools

Autodesk Maya and MotionBuilder; Adobe Photoshop and After Effects; Unity Engine; Vicon Blade; SideFX Houdini