**Diwei (Dean) Sheng**

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**Education**

**New York University**, Tandon School of Engineering, Brooklyn, NY Aug. 2018 – Present

**Western Reserve Academy**, Hudson, OH Jul. 2014 - May 2018

**Work Experience**

**Intern, CloudMinds, Beijing, China** Jun. 2019 - Aug. 2019

***Research & Development Department Intern***

* Researched on the real-time end-to-end convolutional neural network (CNN) StereoNet which can produce depth map. Wrote a [report](https://github.com/deansmile/CloudmindsSummerIntern/blob/master/%E5%AE%9E%E6%97%B6%E7%AB%AF%E5%88%B0%E7%AB%AF%E5%8F%8C%E7%9B%AE%E7%B3%BB%E7%BB%9F%E6%B7%B1%E5%BA%A6%E5%AD%A6%E4%B9%A0%E7%BD%91%E7%BB%9CStereoNet%E5%AD%A6%E4%B9%A0%E6%8A%A5%E5%91%8A.pdf) after analyzing StereoNet.
* Researched on and write a [paper](https://github.com/deansmile/CloudmindsSummerIntern/blob/master/A%20Comparison%20Between%20Three%20Optical%20Flow%20Estimate%20MethodFlowNet2%20PWC-Net%20GeoNet.pdf) about comparing three optical flow estimate method using CNN: FlowNet2, PWC-Net, GeoNet.
* Optimized the neural networks mentioned above to generate optical flow diagram using Jetson TX2 at 20~30 frames per second. Wrote a [progress report](https://github.com/deansmile/CloudmindsSummerIntern/blob/master/%E9%98%B6%E6%AE%B5%E6%8A%A5%E5%91%8A.pdf).

**Intern, Palmdrive, Sunnyvale, CA** Jun. 2016 - Aug. 2016

***Website Designer***

* Assisted in designing a website using HTML and JavaScript to set up an online educational platform: palmdrive.cn.

**Summer Programs**

**National High School Game Academy, Carnegie Mellon University**  Jun. 2017 - Aug. 2017 ***Game Producer***

* Led a team to produce a game called Serpent in one week as a sound designer using MilkyTracker and Audacity.
* Developed a new game called *Aere* in three weeks as an artist. <https://youtu.be/XlEjQTYfeig>.

**Bluestamp Engineering, Palo Alto, CA** Jul. 2016 - Aug. 2016 ***Engineer***

* Completed a starter project of an electronic watch; an individual main project of a 3-D VR Glass
* Programmed on the Google Cardboard, Particle Photon, and Unity.
* Used a handle to control the motion of a 3-D light-sword on the Virtual Reality glasses. Progress Video: <http://bluestampengineering.com/student-projects/bluestamp-2016/>.

**Extracurricular Experience**

**Design for America** Sept. 2018 – Present

***JAZET TEAM Member***

* Designed a STEM-learning [game](https://github.com/deansmile/SSColumbiaGame) for students within the context of the S.S. Columbia project.

**NYU Tandon Vertically Integrated Projects**  Feb. 2019 - Present

***Mixed Reality Engineering Lab Member***

* Simulate laboratory test equipment and connection to physical devices using Mixed Reality technologies: the combination of HoloLens and Leap Motion.

**NYU Polytech Programming Team**  Feb. 2019 - Present

***Team Member***

* Practice programming problems and prepare for the ACM programming competitions.
* Represent NYU Tandon to compete in ACM Greater New York Regional competition on October 27, 2019. Got 23rd out of 65 teams.

**Skills**

* Proficient in programming using Java, Python, C, and C++
* Skilled in web design both front-end and back-end
* Experience in game design and development using Unity
* Familiar with the idea and process of human-centered design
* Familiar with virtual reality and its applications
* Participated in programming competitions
* Familiar with convolutional neural network and its application and optimization