Tianhao (Mike) Zou

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EDUCATION

Grinnell College   **Grinnell, IA**
Computer Science major with strong involvement in Mathematics & Studio Arts   Expected May 2019

- **Cumulative GPA:** 3.98/4.00
- **Selected Coursework:** Theory of computation, Computer graphics, Computer vision & Digital post-production, Data structures, Algorithms and Object-Oriented Programming, Intro to Operating Systems.

TECHNICAL SKILLS

Programming Languages: Java; C; C#; C++; JavaScript (JQuery); Python; GLSL; Scheme; Swift; Node.JS.
Natural Languages: Mandarin (native); English (fluent); French (intermediate); Korean/Hungarian (novice).
Technologies: Linux/Ubuntu (Extensive experience with OS); HTML, CSS (Web development); MongoDB, ElasticSearch; Word, Excel (Data collection); Minitab, ShinyApps (Statistical data visualization); Adobe Premiere, Photoshop, Aftereffects (Video editing, VFX); Sketchup, 3ds Max (3D Modeling).

RELEVANT EXPERIENCE

Summer Engineering Analyst   **Hong Kong**
Goldman Sachs (Asia) LLC   June 2018–August 2018

- Built a real time monitoring system for server connectivity with stock/futures exchanges in APAC;
- Enriched log data indexed by ElasticSearch and created an intuitive React app for visualization and alerts.

Virtual Reality Developer   **Grinnell, IA**
Grinnell College Immersive Experience Lab   May 2018–Present

- Working on object manipulation and teleportation in a VR experience aiming to educate on slave history.

Unity Game Developer   **Grinnell, IA**
Summer computer science research at Grinnell College   May 2017–August 2017

- Developed a prototype 2D game "Epidemic" aimed at statistics education in Unity from scratch;
- Implemented the SIR epidemiological model with probabilities and inverse binomial distribution in C#;
- Built a back-end server end-point on AWS EC2 with MongoDB database support for user data collection and visualization on ShinyApps (a functionality built for classroom settings).

iOS Front-end Engineer   **Grinnell, IA**
Grinnell AppDev Student Organization   August 2016–Present

- Designed and developed the Grinnell News app with front-end interactive features and UI modules;
- Conducted regular code reviews, discussed data integration with back-end team in weekly meetings.

Teaching Assistant   **Grinnell, IA**
Grinnell College Computer Science & Physics Department   August 2016–May 2017

- Mentored students on coding problem sets, debugging sessions and conducted conceptual reviews;
- Guided students through workshops, lab sessions and assisted professors with quantitative analysis.

SELECTED COURSEWORK EXPERIENCE

WebGL 3D Game Project   **Aquincum Institute of Technology, Budapest**
Individual Project on graphics pipeline and rendering 3D scenes   August 2017–Present

- Developed an adventure game with mesh objects, lightings, shaders, ray-tracing in JavaScript and GLSL;
- The final project can be viewed on the repository https://github.com/Mizkoeu/3D_Game_Graphics.

Camera Tracking & Post-production Program   **Aquincum Institute of Technology, Budapest**
Project on feature tracking and applications in film visual effects   August 2017–Present

- Implemented image processing programs in C++ with linear/nonlinear filters and Harris corner detection;
- Built real-time tracking program that computes optimal homography matrices between frames, removes sky using alpha matte keys and fits 3D graphics onto the footage to realize various visual effects.