Dylan Tian

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Education

Brown University May 2021
B.A. in Computer Science & B.A in Education Studies
- **Relevant Coursework:** Data Structures, Operating Systems, Computer Graphics, Interactive Computer Graphics, Deep Learning, Computer Vision, Data Science, Web Development, UI/UX

Work Experience

Google Feb 2022 – *Current*
Software Engineer *Taipei City, Taiwan*
- Ensured Bluetooth components for the Pixel Fold project met performance and latency thresholds, e.g. <0.5s A2DP connection establishment. Triaged, fixed high-priority bugs, prior to and throughout Pixel Fold's release
- Implemented vendor-specific Bluetooth HCI layer and commands, also removed redundancies and improved stability during initialization in C++
- Transitioned Pixel Bluetooth HAL APIs to Android IDL, enabling multithreading across multiple clients
- Laid out design and integration with factory, Qualcomm vendors and implemented a secure encryption feature, in C++ to be rolled out on all Pixel 2024 Projects using QCOM Bluetooth firmware

Facebook June 2020 – Sept 2020
Software Engineering Intern *Menlo Park, California (Remote)*
- Delivered several new interactive, customizable elements such as adjustable tables and furniture objects within the Guardian environment for Oculus VR, in C++, Java, and ReactVR

Brown Visual Computing Jan 2019 – May 2020
Undergraduate Researcher *Providence, Rhode Island*
- Worked with Professor Daniel Ritchie to test and iterate on a deep learning 3D mesh generation pipeline comparable to state-of-the-art algorithms in Python, PyTorch
- Wrote custom normalize, simplification scripts to clean and validate raw 3D datasets containing >10k objects

Microsoft May 2019 – Aug 2019
Explore Intern *Redmond, California*
- Designed and delivered PoC for user productivity features on Outlook Calendar in Typescript, React, Redux, C++

Aerohive Networks May 2018 – Aug 2018
Software Engineering Intern *Milpitas, California*
- Assisted with setting up network lab and executed automation testbeds using Python and Robot

Projects github@dylleealt

Fluid Simulation | *C++, OpenGL*
Physically-based fluid simulation using a Navier-Stokes solver [Stam 1999] with vorticity confinement

Procedural City Generation | *C++, GLSL*
Procedural city scene displaying buildings, fractal terrain, and L-system trees, rendered in real-time with ray marching

CNN for Monte Carlo denoising | *Python, TensorFlow, C++*
Implementation of a Pixar paper [Bako et al. 2017] to improve quality and denoise lower-sample MC renderings

Technical Skills

Languages: C++, C, Java, Python, Typescript, C#, Matlab, R
Platforms and Libraries: Unix/Linux, Android SDK, OpenGL, TensorFlow, PyTorch, React.js, Redux, Node.js
Other: Unity, Agile methodology

Community Engagement

The Brown Daily Herald Editorial Page Board, Design Editor
Brown CS Dept Head TA (CSCI 1230 - Computer Graphics '20)
CS TA (CSCI 0030 - Computation for Social Sciences '18, CSCI 1230 - Computer Graphics '19)
SIGGRAPH Student Volunteers Program
Brown/RISD Game Development