Benjamin Lee

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RESEARCH INTERESTS

I am a 3nd year PhD student in immersive analytics at Monash University, Australia. I am particularly interested in exploring how virtual and augmented reality can facilitate data analysis and understanding in ways not otherwise possible with conventional desktop techniques, such as novel collaboration styles and data visualisations. I am currently exploring the interplay between conventional 2D and novel 3D representations of data in order to facilitate and enhance data exploration, in both virtual and augmented reality environments.

EDUCATION

PhD in Immersive Analytics Feb 2019 - Present

Monash University, Melbourne, Australia

- Advisors: Prof. Tim Dwyer, A/Prof. Bernhard Jenny, Dr. Maxime Cordeil, Dr. Arnaud Prouzeau

Bachelor of Informatics and Computation Advanced (First Class Honours) 2015 - 2018

Monash University, Melbourne, Australia

- Advisors: Prof. Tim Dwyer, A/Prof. Bernhard Jenny, Dr. Maxime Cordeil
- Thesis Title: Heterogeneous Mixed-Reality Display Environments for Immersive Visual Analytics

RESEARCH EXPERIENCE

PhD Student Feb 2019 - Present

Monash University, Melbourne, Australia

Data Visualisation and Immersive Analytics Lab

- Advisors: Prof. Tim Dwyer, A/Prof. Bernhard Jenny, Dr. Maxime Cordeil, Dr. Arnaud Prouzeau

Research Intern June - Sept 2019

Microsoft Research, Redmond, Washington, USA

Visualisation and Interactive Data Analysis Group

- Exploring novel approaches to promote understanding of physical measures and data using virtual and augmented reality
- Building numerous prototype virtual reality experiences which convey said data by leveraging visceral experiences and absolute scales

Honours Student Feb - Nov 2018

Monash University, Melbourne, Australia

Data Visualisation and Immersive Analytics Lab

- Advisors: Prof. Tim Dwyer, A/Prof. Bernhard Jenny, Dr. Maxime Cordeil
- Thesis Title: Heterogeneous Mixed-Reality Display Environments for Immersive Visual Analytics

Research Assistant May - Oct 2017

Monash University, Melbourne, Australia

SensiLab

- Building user study framework within Unity to evaluate the use of virtual reality for patients with OCD

Summer Research Student Dec 2016 – Feb 2017

Monash University, Melbourne, Australia

Monash Adaptive Visualisation Group (MArVL)

- Advisors: Prof. Tim Dwyer, Dr. Maxime Cordeil
- Investigating cross device interaction between large displays and augmented reality

TEACHING

FIT5147 – Data Visualisation and Exploration (Admin TA) Semester 2 2021
FIT5147 – Data Visualisation and Exploration Semester 1 2021
FIT3146 – Makerlab Semester 2 2020
FIT5147 – Data Visualisation and Exploration Semester 1 2020
Monash University, Melbourne, Australia

ACADEMIC SERVICE

- Reviewer:
  - 2022: CHI, VR (Journal Track), VR (Conference Track)
  - 2021: EuroVis, ISMAR, ISS (Summer Round), ISS (Winter Round)
  - 2020: CHI, VIS
- Student Volunteer: OzCHI 2020 (online)

AWARDS

- ACM ISS 2021 Honourable Mention Award
- IEEE VIS 2020 Honourable Mention Award (InfoVis)
- Monash Information Technology Industry-Based Learning Placement Scholarship
- Monash Summer Research Scholarship
- Monash Information Technology Excellence Scholarship

TECHNICAL SKILLS

Proficient in: C# .NET, Unity, R, D3, Python, JavaScript
Familiar with: Git, HLSL, OpenGL, HTML/CSS, SQL, Java, Arduino, C, Processing

CONFERENCE PAPERS

Benjamin Lee, Maxime Cordeil, Arnaud Prouzeau, Bernhard Jenny, and Tim Dwyer. A Design Space for Data Visualisation Transformations Between 2D and 3D in Mixed-Reality Environments. Conditionally accepted at ACM CHI. 2022.

Jim Smiley, Benjamin Lee, Siddhant Tandon, Maxime Cordeil, Lonni Besançon, Jarrod Knibbe, Bernhard Jenny, and Tim Dwyer. The MADE-Axis: A Modular Actuated Device to Embody the Axis of a Data Dimension. In Proceedings of the ACM on Human-Computer Interaction 5, ISS, pp. 1-23, ACM, 2021. **[Honourable Mention Award]**

Benjamin Lee, David Brown, Bongshin Lee, Christophe Hurter, Steven Drucker, and Tim Dwyer. Data Visceralization: Enabling Deeper Understanding of Data Using Virtual Reality. In IEEE Transactions on Visualization and Computer Graphics, 2020. **[Honourable Mention Award]**

Benjamin Lee, Xiaoyun Hu, Maxime Cordeil, Arnaud Prouzeau, Bernhard Jenny, and Tim Dwyer. Shared Surfaces and Spaces: Collaborative Data Visualisation in a Co-located Immersive Environment. In IEEE Transactions on Visualization and Computer Graphics, 2020.

EXTENDED ABSTRACTS AND WORKSHOP PAPERS

Nick Spyrison, Benjamin Lee, and Lonni Besançon. “Is IEEE VIS *that* good?” On key factors in the initial assessment of manuscript and venue quality. Presented at alt.VIS Workshop at IEEE VIS. 2021.

Benjamin Lee, Maxime Cordeil, Arnaud Prouzeau, and Tim Dwyer. FIESTA: A Free Roaming Collaborative Immersive Analytics System. In Proceedings of the 2019 ACM International Conference on Interactive Surfaces and Spaces (ISS '19). Association for Computing Machinery, New York, NY, USA, 335–338, 2019.