



Makerspace Utilization

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Makerspace



- New shared campus resource
- Varied resources and users
- Difficult to determine utilization



Goal

- Allow administrators to make data-driven choices
 - If resources are **over-utilized**, acquire more; if **under-utilized**, repurpose
 - Organize effectively
 - Open when optimal

How

- Software - Openpose
- Hardware - Nvidia Jetson



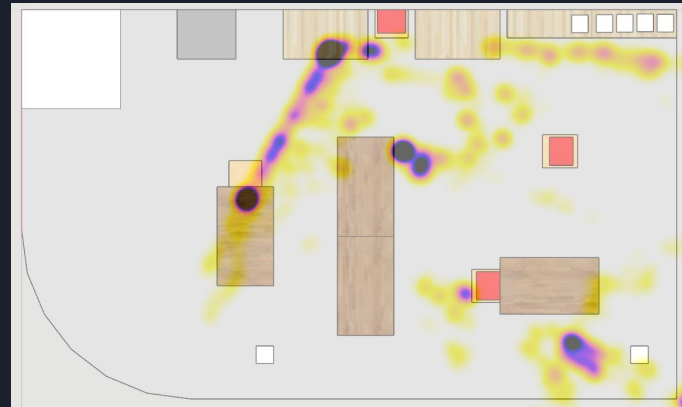
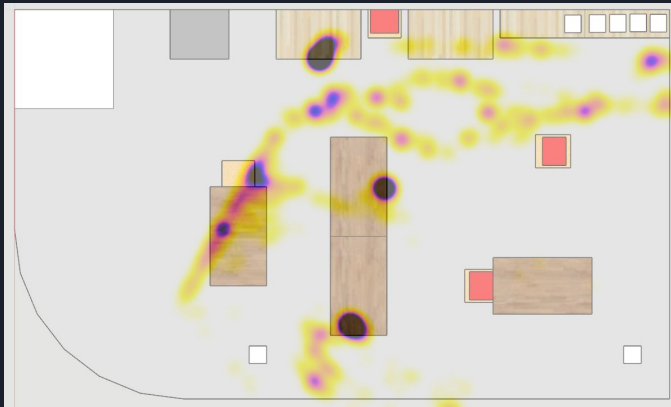
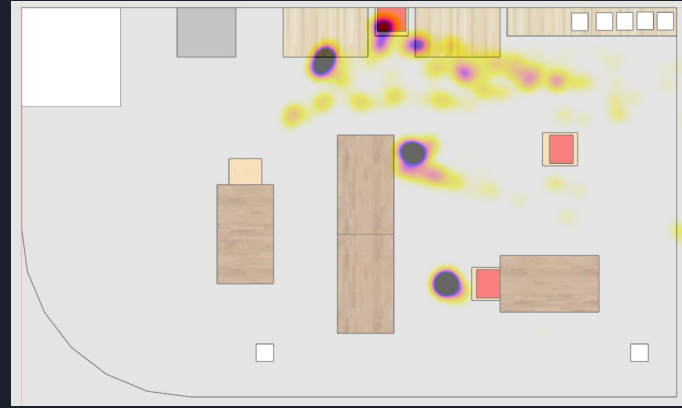
Computer Vision

- Compute the skeletal joint keypoints
- Determine where people are standing



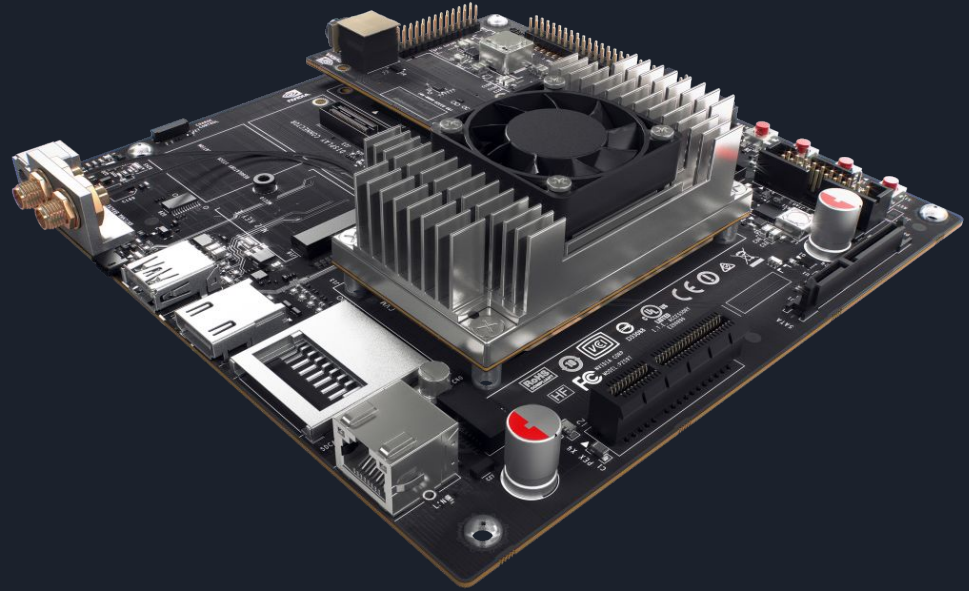


Usage Maps

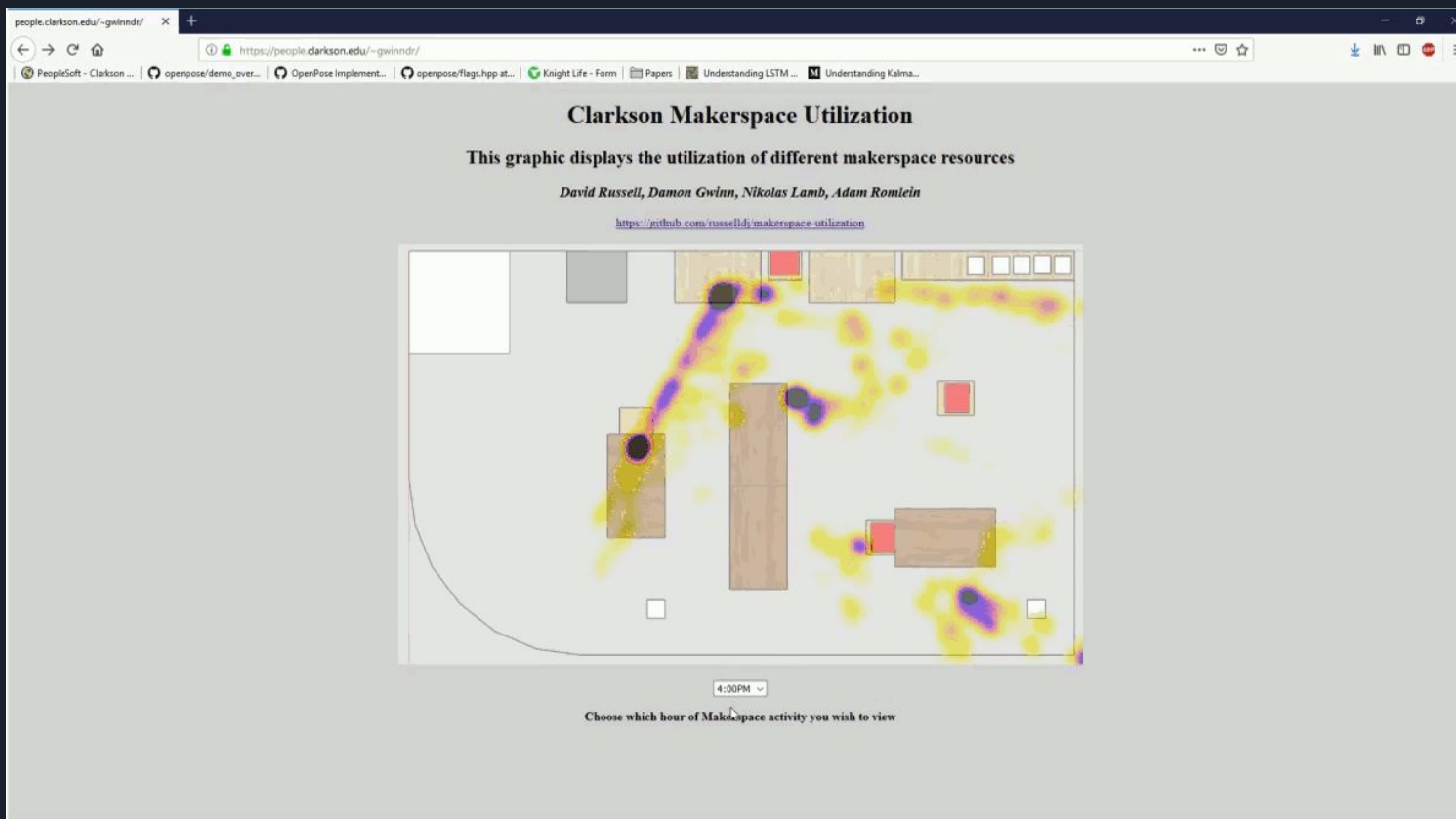


NVIDIA Jetson TX2

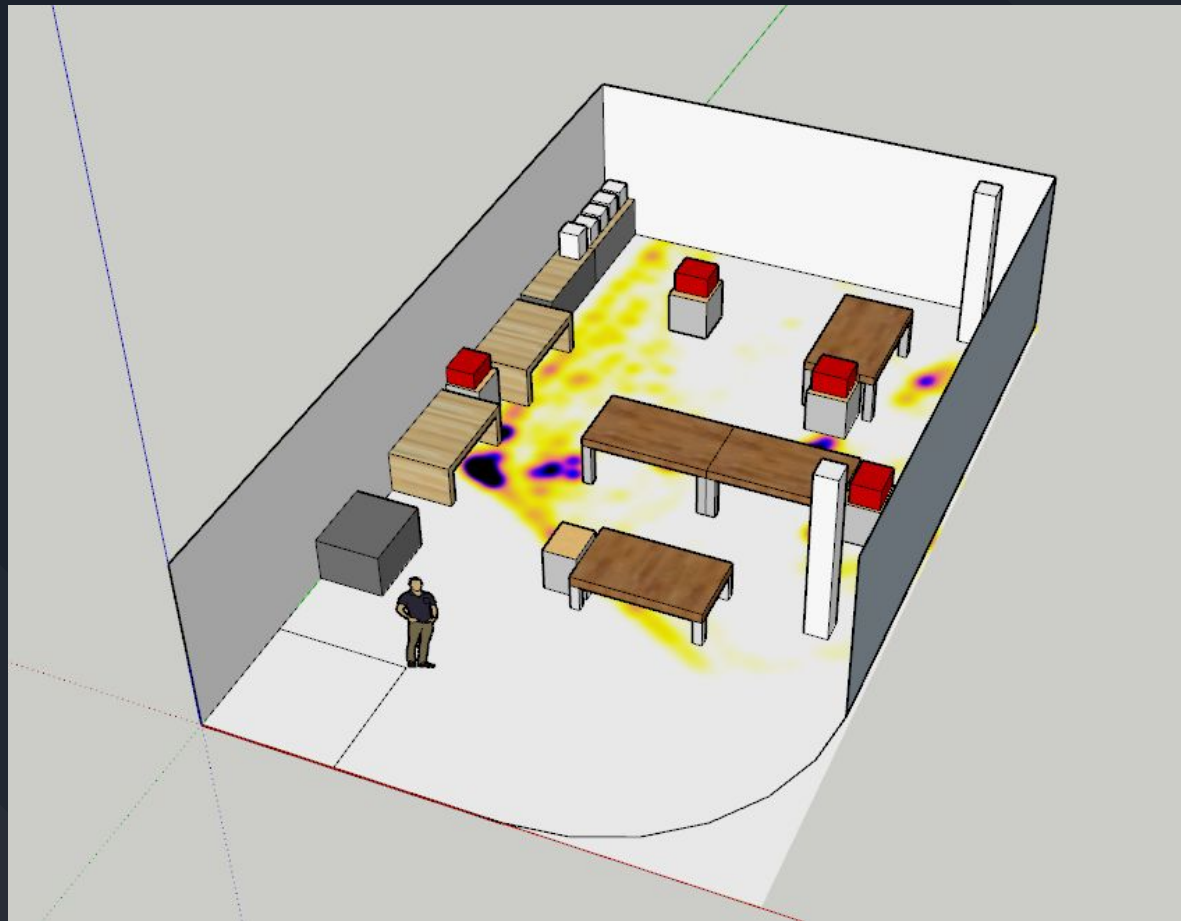
- All processing is local
- Specifically designed for embedded technologies
- Cost-effective onboard GPU
 - \$600



Usable Interface



Future Work





Conclusion

- We present an intuitive approach for assessing the utilization of a shared spaces
- Uses specialized, cost-effective hardware and software
- We plan to fully implement this by Fall 2019



Questions