Ashwin Kachhara

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EDUCATION

Aug '15 - Dec '16 **Georgia Institute of Technology**, *Atlanta, GA*.
Master of Science (M.S.), Computer Science — GPA: 4.0
Graduate Teaching Assistant (Fall '15 & Fall '16) - Design & Analysis of Algorithms (CS3510)

Jun '15 **Indian Institute of Technology (IIT) Bombay**, *Mumbai, India*.
Dual Degree (B.Tech+M.Tech), Electrical Engineering, Minor in Computer Science — GPA: 8.89/10
Teaching Assistant - Microprocessors (EE309), Signals & Systems (EE210)
Undergraduate Research Award - URA03

COMPUTER SKILLS

languages C/C++, Python, MATLAB, LaTeX; Familiar with Java, C#, Swift
tools Android NDK (JNI), iOS, OpenCV, OpenGL, Qualcomm Vuforia, Git, Unity3D, Unreal DevKit

PROFESSIONAL & RESEARCH EXPERIENCE

May-Aug '16 **Apple Inc.**, *Cupertino, CA*, Software Engineering Intern.
Worked on GameplayKit features for Game Technologies Team.

Jan-May '16 **Augmented Environments Lab, Georgia Tech**, *Atlanta, GA*, Graduate Research Assistant.
- Optimized a version of Microsoft RoomAlive modified for facilitating CS Education in a Studio setting
- Integrated interactivity using Kinect depth data; Worked on HTMLRenderer to Win10 Webview migration

May-Jul '14 **National University of Singapore**, *Singapore*, Intern, Interactive & Digital Media Institute.
- Pubby | Gesture-steered android game; Overhauled pattern recognition, **improving low light performance**
- GeoVid | Geo-referenced video portal; Visualized metadata on Maps for algorithmic local event detection

May-Jul '13 **SONY Corporation**, *Tokyo, Japan*, Software Engineering Intern, Head Mounted Display (HMD) Division.
- Developed & tested two interactive Augmented Reality (AR) 3D Virtual Object Manipulation Interfaces
- Engineered **AR-capable HMD prototype** MIPI-interfacing Android processor and video camera

KEY PROJECTS

Jan-Apr '16 **Interactions for Round Android Smartwatches**.
- Developed a novel interaction interface suited for and utilizing the contours of a round smartwatch
- Studied its usability vs. existing interface; Achieved 50% reduction in task completion time over existing

Jan-Apr '16 **Video Analogies**.
- Implemented Image Analogies to learn an artistic style from an image pair, and apply it to a new image
- Extended the algorithm to process video and generate 'artistic' frames parallelized per-frame

Aug-Dec '15 **Room Scale Video-Mixed Augmented Reality Experiences**.
- Interfaced Leap Motion & Stereo Camera, modifying Oculus Rift for virtually untethered AR use
- Developed 3D Drawing, Telepresence & Data Viz apps in AR, demonstrated at GVU Fall Research Showcase

IEEE Virtual Reality 2016 'Redirected head gaze to support AR meetings distributed over heterogeneous environments'

Aug-Dec '15 **Personalizing Yelp Ratings to Culinary Preferences**.
- Extracted & classified words from Yelp Dataset relevant to aspects of a business, using semantic similarity
- Used sentiment analysis techniques on reviews to quantize user culinary preference to suggest restaurants

2014-2015 **Multi-user Shared Virtual Reality Environments**, Undergraduate Research Award - URA03.
- Developed a novel full-body avatar based immersive chat application framework using Kinect, Oculus Rift
- Showcased applications for co-op activities integrating with indigenously engineered haptic jacket

Aug-Nov '13 **Speech Recognition System**.
- Constructed a codebook from training data, to recognize 10 spoken digits by real cepstral coefficients
- Modified **k-means clustering** to estimate each digit centroid; Achieved **85% recognition accuracy**

EXTRA-CURRICULARS

2012-2013 **Internship Coordinator**; Handled internships process of 1500+ students, leading to 57% growth; Awarded by Institute Careers office for outstanding contributions

awards **Hostel Graduating Technical Color** for contributions to winning inter-hostel Tech GCs
DAAD-WISE scholarship to pursue a summer internship at a TU9 university in Germany