ALVIN JUDE

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I am a Human-Computer Interaction researcher currently working in the domain of Digital Representation & Interaction. My current research interests include spatial audio and mixed realities, ethics in AI, crowdsourcing, and human-centred machine learning. I have previously worked and published works on content discovery and recommendations, similarity, and mid-air gestural interaction & pointing devices. I've also performed introspective research within the company to assess and improve internal systems and processes. I've previously held positions in system administration and software development. I seek to combine my deep technical background with my constantly improving understanding of human factors to make technology more human.

EDUCATION

Masters of Psychology · Arden University · 2018–2021 (expected)

Masters of Computer Science · Baylor University · 2012–2014
THESIS: Giving the Users a Hand: Towards Touchless Hand Gestures for the Desktop

Bachelor of Computer Science · Coventry University · 2002–2005
THESIS: Remote PC Manipulation via PDA over Bluetooth

PUBLICATIONS

Finding Similar Movies: Dataset, Tools, and Methods
Hongkun Leng, Caleb De La Cruz Paulino, Momina Haider, Rui Lu, Zhehui Zhou, Ole Mengshoel, Per-Erik Brodin, Julien Forgeat, Alvin Jude
HCI-Europe 2018. International Conference in Central Europe on Human Computer Interaction

I Don't Need To See That: Seeking, Avoiding, and Attempting to Control Video Content
Jennifer Lee, Alvin Jude, Meral Shirazipour, Julien Forgeat
CHI '18. Extended Abstracts on Human Factors in Computing Systems

Content-Based Top-N Recommendations With Perceived Similarity
Charlie Wang, Arpita Agrawal, Xiaojun Li, Tanima Makkad, Ejaz Veljee, Ole Mengshoel, and Alvin Jude
SMC '17. IEEE International Conference on Systems, Man, and Cybernetics

Bimanual Word Gesture Keyboards for Mid-air Gestures
Garrett Benoit, G. Michael Poor, Alvin Jude
CHI '17. Extended Abstracts on Human Factors in Computing Systems

Incremental Learning for Matrix Factorization in Recommender Systems
Tong Yu, Ole Mengshoel, Alvin Jude, Eugen Feller, Julien Forgeat, Nimish Radia
Big Data 2016. IEEE International Conference on Big Data

Improving Gestural Interaction With Augmented Cursors
Ashley Dover, G. Michael Poor, Darren Guinness, and Alvin Jude
SUI '16. ACM Symposium on Spatial User Interaction

Grasp, Grab or Pinch? Identifying User Preference for In-Air Gestural Manipulation
Alvin Jude, G. Michael Poor, and Darren Guinness
SUI '16. ACM Symposium on Spatial User Interaction

Reporting and Visualizing Fitts Law: Dataset, Tools and Methodologies
Alvin Jude, Darren Guinness, and G. Michael Poor
CHI '16. Extended Abstracts on Human Factors in Computing Systems

Evaluating Item-Item Similarity Algorithms for Movies
Lucas Colucci, Prachi Doshi, Kun-Lin Lee, Jiajie Liang, Yin Lin, Ishan Vashishtha, Jia Zhang, and Alvin Jude
CHI '16. Extended Abstracts on Human Factors in Computing Systems

Models for Rested Touchless Gestural Interaction
Darren Guinness, Alvin Jude, G. Michael Poor, and Ashley Dover
SUI '15. ACM Symposium on Spatial User Interaction

Modeling Mid-air Gestures With Spherical Coordinates
Darren Guinness, Andrew Seung, Ashley Dover, G. Michael Poor, and Alvin Jude
SUI '15. ACM Symposium on Spatial User Interaction

Personal Space: User Defined Gesture Space for GUI Interaction.
Alvin Jude, G. Michael Poor, and Darren Guinness
CHI '14. Extended Abstracts on Human Factors in Computing Systems

An Evaluation of Touchless Hand Gestural Interaction for Pointing Tasks with Preferred and Non-preferred Hands.
Alvin Jude, G. Michael Poor, and Darren Guinness
NordiCHI '14. Proceedings of the 8th Nordic Conference on Human-Computer Interaction

Evaluating Multimodal Interaction with Gestures and Speech for Point and Select Tasks
Alvin Jude, G. Michael Poor, and Darren Guinness
NordiCHI '14. Proceedings of the 8th Nordic Conference on Human-Computer Interaction

Gestures with Speech for Hand-Impaired Persons
Darren Guinness, G. Michael Poor, and Alvin Jude
ASSETS '14. 16th International ACM SIGACCESS Conference on Computers and Accessibility

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OTHER PUBLICATIONS

User study for media metadata extraction
Alvin Jude, Ji-Yeon Yang, Jennifer Lee, Julien Forgeat, Meral Shirazipour
Ericsson Research Blog: https://www.ericsson.com/research-blog/user-study-media-metadata-extraction/

Learning things we never knew we never knew
Alvin Jude
Ericsson Research Blog: https://www.ericsson.com/research-blog/learning-things-never-knew-never-knew/

The Future of Sports Visualization
Alvin Jude
Ericsson Research Blog: https://www.ericsson.com/research-blog/future-sports-visualization/

Patents
6 patents filed in the area of recommender systems, and network integration thereof.
1 patent in improving remote AR collaboration, 1 in improving usability of secure file sharing.

Internal Publication
Ericsson Tech Insider: Recommender Systems
Contributed to Ericsson CTO Trends 2018 – Internet of Skills

SERVICE

- Conference section chair, HCI-Europe
- Reviewer, ACM TOCHI, ACM CHI, IJHCI, ACM SUI, IEEE SMC
- Ericsson Research Young Advisory Board
- Speaker, FOSS.my. Topic: Passive monitoring with Collectd
- Ericsson patent reviewer

technical skills

Basic	Intermediate	Advanced
• NodeJS	• Python	• PHP
• CSS3	• Machine Learning	• Recommender Systems
• HTML5	• JQuery	• User Experience (UX)
• Ember.js	• SQL	• Usability Testing
• Cassandra	• R	• Experimental Design
• Nagios	• Matlab	• Hypothesis Testing
• Qualitative Research	• Java	• Gestural Interaction
• SPSS	• Personalisation	• Quantitative Research

other skills

Communication : Former Malaysian Public Speaking Champion
Entrepreneurship: Baylor NewVenture 2014: Top-5 Finalist & 3rd place Elevator Pitch
Martial Arts : Taekwondo, Karate, Aikido, MMA, Krav Maga

work experience

Ericsson · 2014–present · Senior Researcher
Improved discovery of similar items by 38%, saw research from conceptualisation and prototyping through to productization. Led usability testing of new content discovery methods with a European partner. Mentored over 20 students from Carnegie Mellon University as part of practicum project. Recruited and led 10 HCI interns. Performed self-driven research for patent portfolio. Defined *Interaction* research agenda for current research area.

Baylor University · 2013–2014 · Research Assistant
Setup new HCI lab. Mentored juniors, established engineering procedures and infrastructure. Performed research in hand-gestural interaction and explored research options with other next-generation input devices. Overhauled software used for teaching database. Assisted in developing lab curriculum for teaching operating systems.

Self Employed · 2010–2012 · Technical Consultant
Served as an independent consultant for various project and companies including the following:

iOS Development, Agile Perspectives — Malaysia, 2011–2012
Performed R&D for use of Apple products in financial services. Built and deployed app for one international insurance corporation. Built app for a consumer-facing startup dealing in retail. Role included requirements gathering, feasibility studies, business case development, and technical consultation.

System Administration, CouchSurfing.org, 2010–2011
Deployed a cluster of static content servers with NGinX to reduce the load off the dynamic servers, which resulted in higher reliability or website as a whole. Tools of the trade included Puppet, Zabbix, HAProxy.

Aflexi (now OnApp CDN) · 2009–2010 · System Engineer
Responsibilities were more DevOps involving backend development and system administration. Built a custom monitoring infrastructure from the ground up (traditionally done with Nagios) on a specialized Collectd infrastructure used to feed PowerDNS for DNS-based CDN routing. Tools of the trade included Puppet, Zabbix, Nagios, RRD.

iMocha Consulting · 2007–2010 · Software Engineer
Initially hired as a Junior Java Developer, but quickly tasked to build and run a LAMP team of up to 8 people, dealing mostly with financial institutions. Responsibilities leading development work, mentoring programmers, system administrators, system analysts, and interns, as well as requirements gathering from clients.

Sony Manufacturing · 2005–2007 · Engineer
Developed a tool used to trace products which helped cut down traceability time from 2 working days to about 4 hours. Tools of the trade included MFC, VB.NET, PHP, Postgres, GTK.