

Carolyn Saund

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1/1 13 Lawrie Street, G11 5NN, Glasgow, United Kingdom

EDUCATION

PHD, COMPUTER SCIENCE

UNIVERSITY OF GLASGOW

Sept 2019 - Jan 2023 (expected) |

Glasgow, UK

MSC, RESEARCH METHODS IN PSYCHOLOGY

UNIVERSITY OF GLASGOW

Graduated Sept 2019 |

Glasgow, UK

BSC, COMPUTER SCIENCE, BRAIN AND COGNITIVE SCIENCE

TUFTS UNIVERSITY

Graduated May 2015 |

Somerville, MA, USA

CORE SKILLS

ANALYSIS

Deep Learning/Neural Networks

R & RStudio

Matlab

Bayesian Statistics

Experimental Design

Qualitative Methods

Network Analysis

WORKFLOW / TOOLS

Git/Github

React

NodeJS

SciPy/Pandas

Scikit-Learn

PyTorch

TensorFlow

Google Cloud

Theano

Mechanical Turk/Prolific

WordNet

Agile Development

LANGUAGES

PROFICIENT

R • Python •

Javascript/Typescript • C • C++

FAMILIAR

LISP • CSS • HTTP • Java

RESEARCH

PHD, COMPUTER SCIENCE

Sept 2019 - Jan 2023 (Expected) | Dept. of Neuroscience and Psychology,

Dept. of Computing Science

Supervisors: Stacy Marsella, Mary Ellen Foster

- Cognitive analysis of social metaphoric gestures. Motion capture, movement analysis, and mapping of movements onto spoken semantics to form a generative model of social gestures for virtual agents.
- C. Saund and S. Marsella. Cross-cultural transferability of metaphoric gestures. *in prep.*
- C. Saund, A. Birdlaneau and S. Marsella. CCFM: An architecture for generating gestures according to Communicative Function and Motion *in prep.*
- I. Poljak, C. Saund, and S. Marsella. The influence of gesture on memory recall: why random gesturing for virtual agents is a bad idea. *in prep.*

MSC, RESEARCH METHODS IN PSYCHOLOGICAL SCIENCE

Sept 2018 - Sept 2019 | University of Glasgow

- Analysis of complex metaphoric gestures and the mapping between movement dynamics and semantic interpretation.
- Saund et al. 2019, Metaphor and Metaphoric Gesturing. In Proceedings of the 2019 8th International Conference on Affective Computing and Intelligent Interaction (ACII).

WORK EXPERIENCE

COGITO

PLATFORM TEAM LEAD

Jan 2018 - August 2018 | Boston MA

- Managed Agile team of 10 engineers.
- Oversaw top-to-bottom implementation of three major user-facing features.

SENIOR SOFTWARE ENGINEER

August 2017 - Jan 2018 | Boston MA

- Designed, implemented, and managed release pipeline.
- Full-stack development of Role-Based User Management (RBUM) APIs.

JIBO

ROBOT SDK ENGINEER

May 2015 - Dec 2016 | Boston, MA

- Architected data APIs for dev tools to manage robot sensory input from cameras and microphones.
- Implemented front-end UI and developer interfaces to build high-level robot applications.

CHARACTER AI ENGINEER

Jan 2017 - August 2017 | Boston, MA

- Designed and implemented robotic bi-axial Emotion System and corresponding impacts on robot behavior.
- Single-handedly architected and maintained robot listening pipeline (main interface for interaction).

SOFTWARE CONSULTANT

August 2017 - December 2017 | Boston, MA

WORKSHOPS

FORMAL MODELS AND BAYESIAN ANALYSIS | TQUANT: TOOLS FOR QUANTITATIVE THINKING

March 2019 | Balatonföldvár, Hungary

- Instructed in quantitative techniques such as Bayesian analysis, copula theory, and formal probability theory.
- Collaboratively developed RShiny app as teaching tool to visualize logistic regression.

ARTS & AI AUTUMN SESSION | GOETHE INSTITUT

September 2019 | Glasgow, UK

- Meeting of artists and AI researchers on techniques using machine learning to create visual art.
- Technical and creative idea exchange on portrayals of AI ethics to foster productive public discourse.
- Collaborated with visual artists to create “one-person crowd” sourced datasets.

3D DATA VISUALIZATION | BEYOND CONF

October 2019 | Edinburgh, UK

- Introduction to mathematics and tools to visualize high-dimensional data.

SOCIAL MEDIA AS DATA COLLECTION | SCOTTISH GRADUATE STUDENTS IN SOCIAL SCIENCES

Jan 2020 | Glasgow, UK

- Scraped data from Facebook, Twitter, Wikipedia, and Quora using public developer APIs.
- Used network visualization and analysis techniques to infer causal links between social phenomena.
- Discussed ethical usage of publicly available web-based data.

LEADERSHIP AND COMMUNITY SERVICE

VOLUNTEER DATA ANALYST | AI FOR GOOD

Sept 2020 - present

- Mixed-method data analysis for project in collaboration with CareLeavers UK to identify obstacles to success for children leaving government care in the UK.
- Perform qualitative and quantitative analysis, create and explain visualizations, advice on policy interventions.

VOLUNTEER DATA SCIENTIST | DATAKind UK

Jan 2021 - present

- Design and perform NLP analysis on documents to identify patterns in reporting on human trafficking.
- Present and explain findings to non-technical domain experts.

VOLUNTEER | STEM AMBASSADORS

Sept 2018 - present

- Design STEM learning and collaboration activities and deliver to primary school-aged children.
- Includes engineering design principles such as iteration, collaboration, and retrospectives.
- Administered activities to children aged 8-15.

PAST

- Glasgow Ultimate Club | **Women's Captain**, 2019-2020
- Student Representative Council | **PhD Representative**, 2018-2020
- Girl Guiding | **Volunteer**, 2018-2019
- Resilient Coders | **Company Sponsor**, 2017-2018
- Cambridge Inventor's Club | **Co-Organizer**, 2016-2018
- Women in Computer Science Tufts University Chapter | **President**, 2013-2015

PUBLIC ENGAGEMENT

- FameLab UK | **Scottish Finalist**
- 3 Minute Thesis | **University of Glasgow Finalist**
- Hack Your Data Beautiful Week-Long Workshop | **Co-Organizer and Presenter**
- Glasgow Science Festival on Ethics of the Development of Conscious AI | **Invited Speaker**
- Pint of Science, A Mad Introduction to Social Robotics | **Presenter**
- Royal Theatre of Scotland Public Session on Portrayal of AI in Theatrical Media | **Invited Speaker**
- Glasgow Film Society Sci-Fi Series for AI and Consciousness | **Invited Speaker**