

DanbeeKim, PhD

Field Neuroscientist | Multi-disciplinary Educator



RELEVANT EXPERIENCE

Developing novel techniques for non-invasive neuroscience:

- **Designed low-cost and open-source method** for reliably evoking and recording cuttlefish hunting behaviour. **Published novel analysis pipeline on Github** for automating and standardizing the detection and quantification of changes to body pattern in videos of freely behaving cuttlefish. Published full experimental dataset on Harvard Dataverse. (2014 to 2015)
- Coordinated and project managed collaborators across academia and industry to create an interactive exhibit that **collected a video dataset of pupil dynamics from over 24,000 participants in an unsupervised aquarium setting**. Quantitatively benchmarked eye-tracking as a robust method for non-invasively capturing observable measurements of nervous system activity in complex natural contexts. (2017 to 2020)

Managing highly collaborative and cross-disciplinary projects:

- Coordinate and manage user community contributions to code base and documentation for **Bonsai-Rx**, a visual programming language for building reactive systems (e.g. behavioral neuroscience experiments, interactive installations, etc). Edit and organize contributions to code documentation to **ensure readability and accessibility, especially for those who do not self-identify as "programmers" or "coders"** (2021 to present)
- Successfully applied for funding and recruited multiple stakeholders (e.g. Sainsbury Wellcome Centre for Neural Circuits and Behaviour, University College London, Fitzrovia Arts Festival, National Centre for Circus Arts) to establish **Dear Neuroscience**, a programme of neuroscience engagement events where researchers, clinicians, patients, artists, crafters, and parents can **co-create explorations of neuroscience topics that find common ground between research perspectives and lived experiences**. Secure guest speakers and present live interpretations as host, and hire videographers and write impact reports to document events (2018 to present)
- Recruited, hired, and project managed 16 illustrators, and liaised with editors, administrators, beta-readers, Kickstarter funders, and a printing company to author and self-publish an original young adult sci-fi **graphic novel that brings doctoral dissertation to non-academic audiences called The First VIRS** (2020)

Communicating neuroscience to a variety of audiences:

- Wrote popular science articles and co-wrote/narrated an animated web series as a Certified Science Storyteller for **Massive Science** (2017 to 2021)
- Facilitated workshops and curated neuroscience resources for **Into the Light**, a not-for-profit project established to provide support to survivors of sexual abuse (2018 to 2020)
- Wrote and illustrated commissioned neuroscience article in **Architectural Design** (2020)
- Write commissioned articles for expert audiences in **BioTechniques** (2022 to present)
- Co-wrote and managed illustrations for commissioned article in **Vector**, the critical journal of the **British Science Fiction Association** (forthcoming, 2023)
- Contributing neuroscience writer for **The Craftivist Collective Handbook** (forthcoming, 2023)

Building relationships with diverse stakeholders:

- Built relationships with junior and senior academic researchers, industry and free-lance technologists, administrators, health-care professionals, external funders, performance artists, expert hand crafters, architects, illustrators, publishers, journalists, activists, educators, parents, local communities, school-aged students, and vulnerable adults

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RELEVANT SKILLS

Digital tools:

- **Programming languages:** Python (inc. numpy, scipy, OpenCV, matplotlib), Bonsai-Rx, Arduino
- **Collaboration:** Github, Google Workspace, Jupyter, Overleaf, Slack, Teams, Zoom
- **Web development:** CSS, HTML, Jekyll, Markdown

Organized | Prioritization | Multi-tasking:

- **Able to work under pressure and meet tight deadlines**, e.g. developed and performed new live interpretations on strict 3-week cycles at Boston Museum of Science
- **Able to juggle multiple projects and adapt as needed**, e.g. led research and outreach activities at NeuroGEARS while updating company website and managing projects and clients
- **Excellent attention to detail and accuracy**, e.g. doctoral dissertation accepted on first submission with zero corrections

Interpersonal skills | Communication | Teamwork:

- **Able to identify unmet organizational needs and take on new responsibilities to address them**, e.g. general company management and website development for NeuroGEARS
- **Able to write impact reports and evidence-based recommendations**, e.g. quantitatively benchmarked Surprising Minds exhibit and published recommendations in PhD thesis
- **Able to establish working relationships with people at all levels**, e.g. client exec teams, external contractors, target audiences, and internal teammates for collaborations/commissions
- **Able to understand needs and pressures of different audiences**, e.g. teaching neuroscience to designers and engineers vs. facilitating workshops to support adult survivors of sexual abuse

Pro-active | Quick learner | Work independently:

- **Self-starter and pro-active**, e.g. initiated numerous cross-disciplinary cross-sector collaborations and integrated these perspectives to establish a new subgenre of neuroscience research
- **Able to learn quickly**, e.g. quickly learned new web development tools and skills to create online/remote experiences to replace in-person summer camps during COVID-19 lockdowns
- **Able to work independently**, e.g. PhD research projects and doctoral dissertation

EDUCATION AND RELEVANT EMPLOYMENT

2021 to present London, UK	NeuroGEARS, Ltd <i>Research and Outreach Scientist</i>
2016 to 2019 London, UK	Sainsbury Wellcome Centre for Neural Circuits and Behaviour <i>Visiting PhD Researcher</i>
2013 to 2020 Lisbon, Portugal	Champalimaud Centre for the Unknown <i>PhD in Neuroscience, International Neuroscience Doctoral Programme</i>
2009 to 2011 Cambridge, USA	Harvard Medical School <i>Research Assistant, EEG Lab Manager</i>
2005 to 2009 Cambridge, USA	Massachusetts Institute of Technology <i>BSc in Brain and Cognitive Sciences</i>