

DanbeeKim, PhD

Field Neuroscientist | Multi-disciplinary Educator



www.danbeekim.org

danbee@alum.mit.edu

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