

# 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 **Surprising Minds**, 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:

- Lead strategic planning, development, and execution of educational content and resources at **Matter Neuroscience**, with a focus on **helping people better understand and use their neurological reward systems in daily life**. Provide excellent neuroscience education to teammates, social media audiences, user communities, and other stakeholders (2023 to present)
- Successfully applied for funding and recruited multiple stakeholders 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 liased 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)
- Wrote a commissioned article for expert audiences in **BioTechniques** (2022)
- Co-wrote and managed illustrations for commissioned article in **Vector**, the critical journal of the **British Science Fiction Association** (2023)
- Contributing writer and neuroscience consultant for **Matter Neuroscience social media channels** (2023 to present)
- Contributing neuroscience writer for **The Craftivist Collective Handbook** (forthcoming, 2024)

### 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:** Discord, Github, GWorkspace, Jupyter, Matrix, 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 and address unmet organizational needs**, 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

2023 to present  
London, UK

Matter Neuroscience  
Lead Instructor

2021 to 2022  
London, UK

NeuroGEARS, Ltd  
Research and Outreach Scientist

2013 to 2020  
Lisbon, Portugal

Champalimaud Centre for the Unknown  
PhD in Neuroscience, International Neuroscience Doctoral Programme

2010 to present  
Mars Hill, USA

Appalachian Institute for Creative Learning  
Teacher, Staff, Board member (2020 to present)

2005 to 2009  
Cambridge, USA

Massachusetts Institute of Technology  
BSc in Brain and Cognitive Sciences