# Taeho Kang

## Personal Data

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| **Name:** | Taeho Kang |
| **Linkedin:** | taeho-kang-b061a373 |
| **Website:** | taehokang.com |

## Work Experience

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|---|---|
| 03.2023–Present | Postdoctoral Researcher, Cognitive Systems, Department of Artificial Intelligence, Korea University |
| 02.2016–02.2023 | PhD candidate, Cognitive Systems, Korea University |
| 09.2015–01.2016 | PhD candidate, Cognitive Neurotechnology, Korea University |
| 05.2018–08.2018 | Independent Software Contractor |
| 08.2014–04.2015 | Full Stack Engineer, Contents Insight |

## Education

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|---|---|
| 09.2015–02.2023 | **Doctorate in Engineering (PhD)** <br> Dept. of Brain and Cognitive Engineering, Korea University, Seoul, South Korea |
| 03.2010–02.2015 | **Bachelors in Science (BSc)** <br> Interdisciplinary Studies, Konkuk University, Seoul, South Korea |

## Projects

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|---|---|
| 03.2023 – Now | **Virtual Reality and EEG based prediction of human decision making** <br> - Grant writing and project management, experimental study design <br> - Unity, Unreal Engine, C#, C++, |
| 07.2020 – Now | **Investigation of EEG data ICA-based noise corrections in deep learning performance** <br> - Project lead, data science, analysis pipeline design, statistical analysis and deep learning <br> - Python, Matlab, Git, Pytorch, SQLite, Fieldtrip, YAML |
| 01.2016 – 09.2020 | **Neural network based prediction of memory formation from brain signals (EEG)** <br> - Project management, experimental design, data science, statistical analysis and deep learning <br> - Python, Matlab, Pytorch, Tensorflow, SQLite, MNE, numpy, EEGLAB, Fieldtrip, YAML |
| 05.2018 – 08.2018 | **Inventory management system for raw materials & alloys company** <br> - Project management and full implementation process <br> - Python, Flask, SQLite, Android, Javascript and HTML |
| 08.2014 – 05.2015 | **Full stack development in Web** <br> - Python, PHP, Javascript, HTML and CSS |

## Skills

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|---|---|
| Programming | Python: Experienced |
| | - Project experience with Flask, Tensorflow, Pytorch, Numpy, Scipy, MNE |
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| | Matlab: Experienced |
| | - Project experience with EEGLAB, Fieldtrip, BBCI |
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| | SQL : Intermediate |
| | - Project experience with database design/implementation in MySQL, SQLite |
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| | Scheme, C, C#, C++, Android, Javascript, PHP : Basic |
| Research | Project management, grant writing, experimental study design, EEG analysis |
| | Data science, statistical analysis, signal processing, deep learning application |
| Languages | Korean, English : Bilingual fluency |
| | Japanese, German : Beginner level |

## Selected Publications

**Kang, T.**, Chen, Y., Fazli, S. and Wallraven, C., 2020. EEG-Based prediction of successful memory formation during vocabulary learning. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 28(11), pp.2377-2389.

Kang, H., **Kang, T.** and Wallraven, C., 2022. Putting vision and touch into conflict: results from a multimodal mixed reality setup. IEEE Transactions on Visualization and Computer Graphics.

**Kang, T.** and Wallraven, C., 2023. Gotta Go Fast: Measuring Input/Output Latencies of Virtual Reality 3D Engines for Cognitive Experiments. arXiv preprint arXiv:2306.02637.

**Kang, T.** and Wallraven, C., 2023. I See Artifacts: ICA-based EEG Artifact Removal Does Not Improve Deep Network Decoding Across Three BCI Tasks. In Review (IEEE Transactions on Neural Networks and Learning Systems).

Mametkulov, M., Artykbayev, A., Koishigarina, D., Kenessova, A., Razikhova, K., **Kang, T.**, Wallraven, C. and Fazli, S., 2022, February. Explainable machine learning for memory-related decoding via TabNet and non-linear features. In 2022 10th International Winter Conference on Brain-Computer Interface (BCI) (pp. 1-7). IEEE.

**Kang, T.**, Chen, Y., Fazli, S. and Wallraven, C., 2018, January. Decoding of human memory formation with EEG signals using convolutional networks. In 2018 6th International Conference on Brain-Computer Interface (BCI) (pp. 1-5). IEEE.