Christos Karaneen (Karageorgiou Kaneen)

Neuroscience & AI Researcher, Software Engineer

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(*email me for* 📞)

EDUCATION

- **University of Crete** — Heraklion, GR
  M.Sc., Neuroscience, School of Medicine — *Oct. 2021 - Feb. 2024*

- **Technical University of Crete** — Chania, GR
  M.Eng., School of Electrical & Computer Engineering — *Sept. 2014 - Dec. 2019*

RESEARCH EXPERIENCE

- **Banerjee Lab**, **Cold Spring Harbor Laboratory** — New York, USA
  Neuroscience & AI Researcher (NeuroAI Research Intern) — *June 2024 - Nov. 2024*
  Explored how learned behavior evolves into instinct. See poster.

- **Kording Lab**, **University of Pennsylvania** — Philadelphia, USA
  Neuroscience & AI Researcher (Visiting Scholar) — *Dec. 2022 - March 2023*
  Investigated how meta-learning synaptic plasticity rules can best approximate gradient descent.
  See poster and thesis.

- **Poirazi Lab**, **IMBB-FoRTH** — Heraklion, GR
  Neuroscience & AI Researcher (Intern, M.Sc. Fellow) — *July 2022 - April 2024*
  - Examined the computational properties of dendrites. See nobrianer.
  - Continued the work I started at the Kording Lab. See poster and thesis.

INDUSTRY WORK EXPERIENCE

- **mist.io** (acquired by Dell) — Remote
  Software & Infrastructure Engineer — *April 2021 - July 2022*
  - **Platform features and issues**: Developed features and addressed issues having to do with machines, stacks, networks, scripts and other resources managed by the platform within the *api* and *tests* submodules of both community and enterprise editions. See my contributions on mist-ce.
  - **Third-party company tests**: Outlined and implemented the API and functional tests of a distributed micro-services client project for JUNIPER NETWORKS.

- **Greek Research & Technology Network** — Remote
  Software Engineer & Maintainer — *May 2020 - April 2021*
  Contributed to reducing Greece's public sector bureaucracy: built, alongside one lead developer, and maintained the v1 of mitos: the Greek National Registry of Public Services (Εθνικό Μητρώο Διαδικασιών).
  See diavlos.

- **Myrmex** (acquired by Ocado) — Athens, GR
  Software Engineer — *Sept. 2019 - March 2020*
  - **Power-monitoring application**: Created a GUI that displays in real time the battery state of each robot.
  - **gRPC clients**: Ported gRPC client proxies for the APIs of two key system components.
  - **Bug-reporting tool**: Implemented a bug-reporting tool that automatically gathers diagnostics whenever a bug or issue arises, decreasing the time required to collect data from more than 20 min. down to 15 sec.

Engineering Internship Experience

- **Larkum Lab**, **Humboldt University of Berlin** — Remote
  Software & Hardware Engineer — *Jan. 2021 - Aug. 2021*
  Implemented a prototype of an experimental neuroscience protocol for the Larkum and Kremkow labs. This work was based on my previous work. See airtrack.

- **Technical University of Crete** — Chania, GR
  Network Administrator — *Nov. 2018 - June 2019*
  - Learned to do system and network administration tasks (secured network printers, etc.)
  - Read the *UNIX and Linux System Administration Handbook*.

- **Oracle** — Athens, GR
  Database Administrator — *Oct. 2018 - Nov. 2018*
  - Familiarized myself with Oracle DB 12c internals by doing day-to-day DBA tasks.
  - Brushed up my SQL skills.

- **Google Summer of Code**, **GFOSS Open Technologies Alliance** — Athens, GR
  Software Engineer — *Summer 2018*
  Implemented a tool that extracts Responsibilities assigned to Public Administration Organizations from Greece's Official Government Gazette documents. See ggx.

- **Open Lab Athens** — Athens, GR
  Software Engineer — *July 2017 - Sept. 2017*
  - Debugged the beta version of the *Iris SMS* Android app.
  - Made a GUI for getting stats and syncing form data from a smart pen (Neo N2).

Volunteer Experience

- **Poirazi Lab** — Remote
  Software Engineer — *July 2020 - May 2021*
  Volunteered on PyBpod, a programming interface for the Bpod: a system for precise measurement of small animal behavior.
  - Implemented emulator functionality for the Bpod device. See my contributions to the pybpod submodules.
 - Created v1 of the 2AFC experimental neuroscience protocol. See mouse2afc.

Supervisor Experience

- *Henry J. Flynn* @ Poirazi Lab, *April – Aug. 2023*: Drexel University student who under my supervision built upon my volunteer contribution and improved the Mouse2AFC protocol.

Awards, Fellowships & Funding

- 2023 – 2024
  - *BRAIN NeuroAI Early-Career Scholar*, NIH/DARPA **honorarium** (*Nov. 12 – 13, 2024*): $400
  - *CSHL NeuroAI Program* **funding** (*June – Nov. 2024*, Banerjee Lab): $40000
  - *Erasmus+*/IKY **funding** (*June – Aug. 2024*, CSHL travel & stay): 3600€
  - *IMBB-FoRTH* MSc **fellowships** (*July 2023 – April 2024*, Poirazi Lab): 5000€

- 2022 – 2023
  - *UPenn Visiting Scholar* **funding** (*Dec. 2022 – March 2023*, Kording Lab) : $6000
  - *Erasmus+*/IKY **funding** (*Dec. 2022 – March 2023*, UPenn travel & stay): 4500€

Conferences, Workshops & Summer Schools

- *BRAIN NeuroAI Workshop 2024* @ **NIH** National Institutes of Health, Bethesda, Maryland, USA (**poster**)

- NAISys2024: *From Neuroscience to Artificial Intelligence 2024* @ Cold Spring Harbor Laboratory, New York, USA

- MLSS2024: *Machine Learning Summer School 2024* @ OIST, Okinawa, Japan (**poster**)

Publications

1. Christos Karageorgiou Kaneen, "*Meta-learning synaptic plasticity rules to approximate gradient descent*", M.Sc. Thesis, School of Medicine, University of Crete, Heraklion, Greece, 2024 (https://elocus.lib.uoc.gr/dlib/0/c/8/metadata-dlib-1713262345-844945-28206.tkl)

2. Christos Karageorgiou Kaneen, "*Methodology for designing GDPR compliant IoT applications*", M.Eng. Thesis, School of Electrical and Computer Engineering, Technical University of Crete, Chania, Greece, 2019 (https://doi.org/10.26233/heallink.tuc.84151)

3. Christos Karageorgiou Kaneen, E.G.M. Petrakis, "*Towards evaluating GDPR compliance in IoT applications*", Procedia Computer Science, Volume 176, 2020, Pages 2989-2998 (https://doi.org/10.1016/j.procs.2020.09.204)