

Apiros3

<https://github.com/Apiros3>

EDUCATION

University of Oxford

Oct 2022 – Jun 2026

Master in Mathematics and Computer Science

- Postmaster of Merton College, University of Oxford
- First Class in Year 2 Examinations, Distinction in Year 1 Preliminary Examinations
- Relevant courses: Functional Programming, Lambda Calculus, Topology, Logic and Proof, Rings and Modules

EMPLOYMENT / PROJECT COLLABORATION

Mobility Reading Group, University of Oxford | Research Assistant

Jun 2024 – Present

- Topics : Multiparty Session Types, Coq Mechanization
- Advisor : Prof. Nobuko Yoshida

Nikkei | Intern, *Data Engineer*

Sep 2023

- Analyzed internal data from Nikkei Atlas to identify demographic and usage trends with SQL, Python and BigQuery
- Implemented a refinement of Nikkei internal search engine accuracy using Google's Natural Language Processing API framework
- Co-developed supplementary chat-bot using GPT and FastAPI as a client-side extension

teamLab | Intern, *Machine Learning Team*

Jul 2023 – Aug 2023

- Developed and presented an optimization algorithm on placing moving ropes without collision in 3D space
- Improved heuristic score by 28.5% compared to client's in-house model, and automated the full optimization process to be used in future projects and exhibits
- Improved precision and running time with annealing and concurrency in C++

RESEARCH

Publications

- | | Date |
|---|------------|
| • Project Name, Title, etc , Conference Title
Person 1, Person 2, <i>T. Kamegai</i> , Person 4. | |
| • title of proof , Archive of Formal Proofs
<i>T. Kamegai</i> | month 2024 |
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<i>T. Kamegai</i> | month 2024 |

Invited Talks / Lectures

- **Subject Reduction for Synchronous MPST in Coq.** Nov 20, 2024
Final lecture of Master's Course in *Distributed Processes, Types and Programming*, University of Oxford

Contributions

- *T. Kamegai*, Palindromic primes under prime bases, entries A372141 and A372142 in The On-Line Encyclopedia of Integer Sequences, Apr 2024
- *T. Kamegai*, Probability sequence on a coin flipping game variant, entry A369580 in The On-Line Encyclopedia of Integer Sequences, Jan 2024

Grants

- Yanai-Tadashi Foundation Scholarship : Full funding of tuition, room and board, insurance plus an additional living stipend for the duration of the undergraduate degree (Approx. £270,000; 2022 ~ 2026)
- Merton Summer Project Scheme : Full funding of accomodation and hall expenses during Summer Research
- Exhibition Scholarship by Merton College, University of Oxford

EVENT ORGANIZATION

Oxford University CompSoc | Head of Talks

May 2023 – Present

- Responsible for inviting and coordinating events with internal and external speakers in computer science
- Past speakers: Kevin Buzzard, David J. Malan, Peter Millican, and Brent Mittelstadt