

Rahul Ramaka

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EDUCATION

- 2024-** Department of Computer Science, University College London
M.Sc. (Hons.) in Computational Finance.
- 2019-22** Department of Informatics, King's College London
B.Sc. (Hons.) in Computer Science.
1st-Class Honours (91%). Springer Nature Prize. Dean's List ×2.
- 2016-18** DPS International School Singapore
A Level (A A* A* A*). AS Level (AAAA).*
Gold Scholar Badge and Excellence Scholarship (S\$6500).

EXPERIENCE

- 2024-24** Real-time bidding (RTB) Statistics, Quantcast
Software Engineer (Dev) Intern
- Onboarding first-party data from digital advertising clients onto Quantcast's DSP (demand-side platform).
- 2023-23** International Receive (Swift Payments Integration), Wise
Software Engineering Intern
- Worked in cross-border payments during the Swift-Wise integration plan.
 - Experimented in QoS-aware payment pre-validation on the edge and intrinsic data integrity/provenance using cryptographic infrastructure.
- 2023-23** PLSV Group, University of Cambridge
Research Intern
- Worked on the DIADEM project supported by EPSRC, Arm and Pernosco.
 - Experimented in creating embeddable tools for the LLVM compiler stack to improve coverage for compiler-generated debugging metadata.
- 2022-22** Amazon Web Services (AWS), Amazon
SDE Intern
- Project CommonArchs: identify and prioritise support for common AWS user operational patterns.
 - Designed and implemented SciPy-based ML framework to cluster customer Cloudformation graphs and hosted using AWS (SageMaker, Glue, OpenSearch).
 - Built Python-based dashboard app that **accelerated PM screening** and instantly visualized product's unique engineering pipeline.
- 2021-22** Department of Informatics, King's College London
Teaching Associate: C++ programming (2021) and Operating Systems (2022)
- Head TA for the Operating Systems (2022) module.
 - Tutored students in OS development, C/C++ programming and Unix.

- 2021-21 Prime Video & Amazon Studios, Amazon**
SDE Intern
- Created a livestream player (**GStreamer + Python + JavaScript**) with real-time A/V defect alarms and **cut overhead** of third-party-owned legacy software.
 - Built a service emulator for evaluating AWS microservice orchestration latency and billing, and **increasing performance by 3x**.
 - Contributed to AWS Elemental Media Services: MediaConnect, MediaStore, Kinesis Streams.
- 2020-20 Mobile Messaging, Snapchat**
Software Engineer Intern
- Worked on cross-platform mobile messaging across Android and iOS.
 - Contributed to the cross-language interface (Djinni) between the platform-specific presentation code and the backend C++ libraries.

TECHNICAL SKILLS

Languages	Python, C++20, C, Java, JavaScript, Scala, L ^A T _E X
Database	MySQL, PostgreSQL, MongoDB, Elasticsearch
Web	Node.js, Express, TypeScript, Django, HTML, CSS
Tools	Docker, k8s, Make, CMake, perf, gdb/lldb, gRPC, OpenSSL
Systems	AWS, TensorFlow, SciPy, NumPy, GNU/Linux, TCP/IP

PROJECTS

- libdeep** a PyTorch-like deep learning library in C++/Python
- lightdb** a lightweight disk-oriented relational database in C++
- netstackxx** rewriting the Linux networking protocol stack in C++
- common-archs** clustering AWS Cloudformation graphs
- liballocsgc** a semi-precise C/C++ garbage collector extension for liballocs

NOTABLE GRADES

A full copy of academic transcript certificate is available on request.

<u>Year</u>	<u>Module</u>	<u>Level</u>	<u>Mark</u>
2019/20	Database Systems	4	96
2019/20	Data Structures	4	92
2019/20	(Java) Programming Practice and Applications	4	91
2020/21	Foundations of Computing 2 (Advanced Algorithms)	5	98
2020/21	Operating Systems and Concurrency	5	96
2020/21	Practical Experiences of (C++ and Scala) Programming	5	95
2021/22	Compilers and Formal Languages	6	94
2021/22	Cryptography	6	97
2021/22	(Mathematical) Optimization Methods	6	93

References available upon request