

Rahul Ramaka

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EDUCATION

- 2024-25** **Department of Informatics, King's College London**
M.Sc. (Hons.) in Advanced Computer Science.
- 2020-23** **Department of Informatics, King's College London**
B.Sc. (Hons.) in Computer Science.
1st-Class Honours (**91%**). Springer Nature Prize. Dean's List ×2.
- 2017-19** **DPS International School Singapore**
A Level (A A* A* A*). AS Level (AAAA).*
Gold Scholar Badge and Excellence Scholarship (S\$6500).

EXPERIENCE

- 2025-25** **Prime Video Web, Amazon**
SDE Intern
- Project 1: Redesigned PV video player architecture for seamless playback transitions across Continue Watching and Live Sports carousels.
 - Project 2: Analyzed Person Pages traffic patterns, competitive landscape, and SEO value, informing senior leadership's decision to invest in the feature.
- 2024-24** **Real-time bidding (RTB) Statistics, Quantcast**
Software Engineer (Dev) Intern
- Onboarding first-party data from demand-side advertising clients onto Quantcast.
- 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.
- 2022-23** **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.

- 2022-22 Amazon Web Services DevOpsGuru, 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).
- 2021-21 Video Quality Analysis, Prime Video & Amazon Studios 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.
 - Contributed to AWS Elemental MediaConnect, MediaStore, Kinesis Streams.

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 (**bachleor's thesis**)

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

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>
2020/21	Database Systems	4	96
2020/21	Data Structures	4	92
2020/21	(Java) Programming Practice and Applications	4	91
2021/22	Foundations of Computing 2 (Advanced Algorithms)	5	98
2021/22	Operating Systems and Concurrency	5	96
2021/22	Practical Experiences of (C++ and Scala) Programming	5	95
2022/23	Compilers and Formal Languages	6	94
2022/23	Cryptography	6	97
2022/23	(Mathematical) Optimization Methods	6	93

References available upon request