

DOMINIC LINDSAY

Technical Lead Manager | Distributed Systems Specialist

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Experienced and passionate *senior engineer* with strong demonstrated history of working in both academic, software and financial industries as both contributor and researcher. Currently leading the platforms teams at Oneiro Solutions. Previously researched development of novel resource management and scheduling systems and policies for decentralised clusters.

PROFESSIONAL EXPERIENCE & PROJECTS

-  **March 2024 – Present | Oneiro Solutions Ltd | Technical Lead Manager | Staff Engineer**
Promoted to Technical Lead within a year, I led initiatives to refactor Terraform IaC, automate and scale EKS deployments, and introduce GitOps pipelines with ArgoCD. Achieved SOC 2 Type 1 certification, mentored junior developers, conducted hiring, and collaborated with clients to design solutions and resolve issues. Developed innovative scheduling mechanisms for distributed processes, positioning the business for SOC 2 Type 2 compliance.
-  **September 2021 – March 2024 | iwoca | Senior Software Engineer**
Led the development of a modeling platform enabling continuous training, versioning, and serving of models and features. Optimized AWS costs by improving ETL pipelines and observability tools, and evaluated streaming frameworks to address batch processing bottlenecks. Enhanced code quality, observability, and performance through refactoring, tooling, and automation.
-  **September 2017 – June 2023 | Lancaster University | Associate Lecturer**
Teaching and coursework development, as well as lecture development and delivery across Operating Systems, Networking and Distributed Systems.
-  **March 2021 – June 2021 | Unikraft | Research Engineer Internship**
Internship object: Develop unikraft OCI compatible runtime and integration of a unikernel build, deploy and execute workflow to Kubernetes control plain. I also develop a package command capable of packaging unikernels as OCI compatible images.
-  **June 2020 – September 2020 | Arm Research | Research Engineer Internship**
Contributed to memory and capability pointer management libraries for formally verified type 1 hypervisor kernel using Rust.

RESEARCH & PUBLICATIONS

- [1] Dominic Lindsay, Ging-Fung Yeung, et al. "An Empirical Study of Inter-cluster Resource Orchestration within Federated Cloud Clusters". English. In: *2021 IEEE International Conference on Joint Cloud Computing (JCC)*. IEEE, Oct. 2021. ISBN: 9781665434805. DOI: 10.1109/JCC53141.2021.00019
- [2] Dominic Lindsay, Sukhpal Gill, et al. "PRISM: An Experiment Framework for Straggler Analytics within Containerized Clusters". In: *WoC 2019 Fifth International Workshop on Container Technologies and Container Clouds*. ACM, Dec. 2019, pp. 13–18. ISBN: 9781450370332. DOI: 10.1145/3366615.3368353

EDUCATION

-  **September 2017 – June 2023 | Lancaster University | PhD Computer Science**
Orchestration systems for decentralised infrastructures. Investigates impact of inter-cluster characteristics such as sporadic utilisation, cross cluster latency and workload affinity. Specifically focused on development of novel scheduling policies and resource management systems for federated systems. [DID NOT COMPLETE]
-  **October 2012 – June 2016 | Lancaster University | Msci Software Engineering (1st class honours)**
Core Modules: Software Design Studio – Part 1 & 2, Distributed Systems, Advance Distributed Systems, Operating Systems, Networking, Advanced Programming, Communication Systems

AWARDS

- **Best paper award at IEEE JointCloud'21** – Award for best paper at IEEE Jointcloud'21. I received the highest scores for my work "An Empirical Study of Inter-Cluster Resource Orchestration within Federated Cloud Clusters"

SKILLS & EXPERTISE

Programming Languages: C, C++, Rust, GoLang, Lua, Java, Python, R, HTML, CSS, JavaScript, TypeScript, Terraform, Terragrunt, \LaTeX .

Technologies: Linux, Linux internals, Docker, QEMU, LibVirt, Kubernetes, Argo, GitLab API, Apache YARN & HDFS, Apache Spark, Pandas, GRPC, Java RMI, CockroachDB, PostgreSQL, RisingWave, Flink.

Expertise: Profiling, Resource Management and Scheduling, Networking, DNS, Systems Programming, PKI, SSL/TLS, Operating Systems, Distributed Systems concepts and design.