Christopher Teo 82 Greenhaze Lane Great Cambourne Cambridge CB23 5BH

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## Application for 2024 Internship at Nokia

Dear Sir or Madam,

I have completed my Bachelor of Science Computer Science degree at Durham University, final year thesis title: Exploring Mixture of Experts and Sparse Vision Transformers. I am skilled in modern development tools, several programming languages and web/3D technologies with over 7 years of development experience. I am interested in Machine Learning, Neural Networks, Physics Engines and Game Design. I am seeking a summer internship from June - September 2024, as I have been accepted into Masters of Science in Scientific Computing and Data Analysis which begins in October 2024.

My BSc research combined Mixture of Experts with Vision Transformers which improved object detection in real time — please see attached thesis. I love designing optimal architectures and I have a passion for writing efficient, low level C/C++ code. I really want to gain experience in advanced data mining to intelligent computational models.

In my spare time I am learning about writing performant game engines in C++ using the Data Oriented Paradigm. I have implemented my own version of Entity Component System (ECS) to maximise parallelism and cache efficiency. The problems I enjoyed solving involved fragmentation of datatypes in the ECS database and writing efficient query algorithms for obtaining and iterating sets of entities.

I won the NWG Hackathon in 2023 and Durhack in 2022. I believe that I can contribute positively at Nokia with my diverse experience thus far, having worked at startups (Poly AI), industry (Toshiba, MediaTek, AIXTRON) and academia (Durham University) for roles in both commercial and research environments.

Yours sincerely,

Christopher Teo