

Research Scientist Search Committee Google Research

Dear Hiring Committee,

I am writing to express my strong interest in the Research Scientist position at Google Research. As a Ph.D. candidate in Computer Science at Boston University, my research bridges programming languages and robotics to create more reliable and efficient autonomous systems. I focus on developing robust systems that reliably translate high-level objectives into real-world performance.

My work has demonstrated significant impact in both systems and robotics. I developed CAPS, a regularization technique achieving 80% power reduction in real robots (90+ citations), and pioneered techniques for reducing neural network size by 99% while preserving performance. On the other hand, my master's thesis explored methods for composing compiler transformations, showcasing the breadth of the expertise I gained during my time at Boston University. As a research mentor, I've led student projects to multiple successes, including an award-winning F1Tenth racing team and research published at ECCV.

I admire Google's commitment to open-source, as I actively contribute to the research community through open-source projects, leveraging expertise in ML frameworks (TensorFlow, PyTorch), systems programming (C/C++), and formal methods (Rocq, Lean). My recent work includes developing risk-aware path planning and adaptive Lyapunov-based controller learning for improving robotic system performance.

I am particularly drawn to Google Research's emphasis on combining fundamental research with real-world impact. I would welcome the opportunity to discuss how my expertise in efficient learning and track record of successful research could contribute to Google's mission.

Best regards, Bassel El Mabsout