Office of Graduate Education
Georgia Institute of Technology
Savant Building, Room 301
631 Cherry St., NW
Atlanta, GA 30332-0321

To the OMSCS Admissions Committee:

I am delighted to recommend John Patrick Amata for admission to Georgia Tech's Online Master of Science in Computer Science program. I taught John in Advanced Operating Systems and Networking at De La Salle University, Term 2 AY 2024-2025 where he consistently demonstrated exceptional technical depth and intellectual initiative.

His capstone project, RootOS, was the most ambitious submission I've received. In just six weeks, John independently built a full desktop-style OS from scratch. It boots via a custom x86 assembly bootloader, enters protected mode, and runs a C-based kernel he authored himself. The system features interrupt-driven I/O, a cooperative scheduler, and VBE-powered graphics for a functioning GUI, well beyond typical academic console-based OS builds.

The project was grounded in the 2024 paper "Improving the Educational Value of Operating Systems" by Sava et al., which John cited and expanded upon. His companion paper also proposed embedding a retrieval-augmented LLM tutor into RootOS, creating a real-time learning platform, combining systems engineering and AI pedagogy.

He demoed RootOS live to a class of senior engineers, articulating every subsystem. Writing 5,000+ lines of modular, well-documented in Programminng C and Assembly code showed maturity, clarity, and fast execution. He submitted coursework deliverables early and used each assignment and lecture to push beyond the syllabus, culminating in the project.

For his ability to absorb complex systems rapidly, apply research meaningfully, and execute with self-directed discipline, I strongly recommend John Amata to the OMSCS program.

Sincerely,

13 June 2025
Raquel Marasigan, CRA MABA
Professional Lecturer
College of Computer Studies
De La Salle University, Manila
raquel.marasigan@dlsu.edu.ph