Jeremy Ku-Benjet

Email: jeremykubenjetschool@gmail.com

Education

Cornell University	*Undergraduate, Computer Science, GPA: 3.8*
	Courses: Computer Architecture, Introduction to Compilers, Distributed Systems, Linear Algebra, Multivariable Calculus, Object Oriented Programming, Functional Programming
Stuyvesant High School	Courses: Systems Level Programming, Computer Graphics, Complex Analysis, Math of Quantum Mechanics

Experience

Research Assistant, Capra (2024-present)	Extended fud2, a compiler driver, a tool for chaining together invocations of tools in the Calyx compiler infrastructure.
	Improved its embedded language with more succinct syntax and nicer semantics
	Generalized compiler invocations to take multiple input and output files, which tools to execute in what order using ideas for type directed program synthesis and superoptimization
Software Engineer, CMSX (2024-present)	Implemented a button to export student assignments into a calendar file.
	Bug fixes
	Current work: improving course staff's ability to easily automate grading and feedback to students
Teaching Assistant, Cornell University (2023-present)	Worked in a small team to design, implement, and test infrastructure to host over 300 students attacking vulnerable C programs
	Worked in small team to write an automated grading tool
	Staffed office hours and lab component of the course

Projects

3D Rendering Engine	Implemented a 3D graphics engine supporting Phong and toon shading as well as animation based on a scripting language.
Dynamic Wifi Extender	Investigated the feasibility of adjusting the signal strenght of an extender depending on the proximity to devices connected to reduce power usage. Implemented a demo on a Raspberry Pi.
Seas the Throne	Lead the programming effort of a team of artists and programmers to create a video game in Java built with LibGDX.

Proficiencies

Languages	OCaml, Rust, C, C++, Java, Python, Assembly (x86-64 and RISC-V), Verilog, Lua, Bash
Tools	Dune, Cargo, Make, Ninja, Maven, Unix Shell, Git, Docker, Debuggers (GDB, LLDB)