

Jan-Paul Vincent Ramos-Dávila

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Education

Cornell University

2021 - 2025

Bachelor of Arts in Computer Science & Philosophy

Experience

Carnegie Mellon University

05/2022 - Present

Research Intern

Advised by Dr. Jonathan Aldrich & Dr. Joshua Sunshine on Gradual Verification, a state of the art verifier that leverages partial specifications for scalability in specification-driven verification. Fixed optimization bugs and implemented a Property Based Testing tool for evaluating the soundness of Gradual C_0 .^{[3][8]}

Cornell University

10/2021 - Present

Undergraduate Research Assistant

Advised by Dr. Adrian Sampson in the Calyx Compiler Infrastructure for Accelerator Generators. Implemented the Graphicionado graph analytics algorithm in Calyx. Worked on a symbolic execution tool to compile Calyx parallelism to a Racket DSL equivalent.^{[2][4][5]}

Google

07/2021 - 08/2021

Computer Science Summer Institute

Learned programming fundamentals in JavaScript directly from Google engineers and got an inside look at Google employee tools used for web development. Developed a peer-to-peer instant messaging system with the Express.js framework and Heroku hosting.^[7]

Publications

POPL '23 (SRC)

Evaluating Soundness of a Gradual Verifier with Property Based Testing ↗

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Coursework Projects

RNAfoldml *CS 3110 Functional Programming* ↗

An OCaml package that enables users to input both RNA sequences in FASTA format and a set of constraints to predict RNA secondary structure.^[1]

Honors

Travel Scholarship, ACM SIGPLAN Conference PLDI

2022

Finalist, Mathematics, Regeneron International Science and Engineering Fair

2020 & 2021

Technical Skills

Languages: OCaml¹, Python², Scala³, Rust⁴, Racket⁵, Java⁶, JavaScript⁷, C⁸, English, Español, Italiano

Tools: Unix, VSCode, Git, IntelliJ IDEA, Docker, PEGjs, Neovim