

GAGAN CHANDAN

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RESEARCH INTERESTS

**Program Analysis, Formal Methods, Automated Theorem Proving,
Functional Programming, Type Theory**

EDUCATION

B.Tech in Computer Science and Engineering
PES University

November 2022 – Present
Bengaluru, India

EXPERIENCE

Research Intern

Indian Institute of Science

June 2024 - Present
Bengaluru, India

- Worked on static analysis of Java programs under Professor K.V. Raghavan at the Programming Languages Lab

Student Head

Centre for Information Security, Forensics and Cyber Resilience, PES University

Feb 2023 - May 2024
Bengaluru, India

- Participated in multiple national and international Capture The Flag (CTF) competitions, focusing on Reverse Engineering and Binary Exploitation
- Taught workshops on Reverse Engineering, Cryptography and Steganography for undergraduate students of all semesters.
- Assisted in teaching and lab setup for Cybersecurity courses offered to final year undergraduates and M.Tech students.
- Conducted hackathons and CTF competitions for over 300 students.

PROJECTS

pocket

A compiler for a procedural, statically typed programming language written in OCaml

<https://github.com/gaganchandan/pocket>

java-static-analyses

A collection of static analyses for Java programs

<https://github.com/gaganchandan/java-static-analyses>

solveit

A simple SAT solver for propositional logic written in Haskell

<https://github.com/gaganchandan/solveit>

goto-lang

An interpreter for a minimalistic programming language written in OCaml

<https://github.com/gaganchandan/goto-lang>

TALKS AND WORKSHOPS

Introduction to Reverse Engineering

PES University

October 2023
Bengaluru, India

- Talk followed by hands on session for over 200 undergraduates
- Slides: <https://gaganchandan.com/talks/revpesu2023>

Introduction to Cryptography and Steganography

PES University

April 2023

Bengaluru, India

- Interactive Workshop for over 100 undergraduates
- Slides: <https://gaganchandan.com/talks/cryptopesu2023>

TECHNICAL ABILITIES

Programming Languages:

Proficient in: Ocaml, Haskell, Java, Python, C

Familiar with: Scala, x86 assembly, C++, Lua, JavaScript, Rust

Tools and Technologies:

Coq, Ghidra, AFL++, Z3, LLVM, GDB,

Nmap, WireShark, Linux, Git, Docker, LaTeX, Maven

Skills:

Functional Programming, Compiler Design, Reverse Engineering,

Fuzzing, Penetration Testing

ACCOMPLISHMENTS

Capture The Flag

ctftime.org

- 2022 - Annual ranking of 8th out of 4392 nationally and 190th out of 38050 globally with team ISFCR PESU (<https://ctftime.org/team/166645>)
- 2021 - Annual ranking of 15th out of 4392 nationally and 203rd out of 36811 globally with team Ashes (<https://ctftime.org/team/155001>)

ADDITIONAL SKILLS

Languages:

English (Fluent)

Kannada (Native language; Fluent)

Hindi (Working knowledge)

OTHER INTERESTS

Football, Distance Running, Swimming, Chess, Basketball