

Ashwin Prasad Shivarpatna Venkatesh

Research Associate | Ph.D. Candidate | Heinz Nixdorf Institute, Paderborn University

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Experience

Research Associate and Ph.D. Candidate

Heinz Nixdorf Institute, Paderborn University

Sept 2020 - Current Paderborn, Germany

- Received the **DAAD prize** for outstanding achievement by a foreign student.
- Research on **static analysis** for **Python** and its application in machine learning development processes.
- Representing the **Secure Software Engineering** research group in the German government funded **KI-Marktplatz** project. Currently working on security concepts and certification of AI software artifacts.
- Teaching assistant** for various courses and supervision of master students.

Student Research Assistant

Networking Department, Paderborn University

Sept 2019 - June 2020 Paderborn, Germany

- Research on 5G programmable network infrastructure under the **5G-PICTURE** project funded by the EU.
- Led the development efforts to demonstrate our research in **Barcelona**.
- Co-authored** a research paper, contributions include: implementing, experimenting, and providing statistical evidence.

Student Software Developer

Diebold Nixdorf

Sept 2017 - Sept 2019 Paderborn, Germany

- Developed **business process automation tools** optimizing the company's resources. This impacted the assignment of tasks to developers.
- Designed and implemented a **metrics dashboard** that provides actionable insights into the development process.

Software/Product Developer

Fracktal Works (Startup)

March 2016 - March 2017 Bengaluru, India

- Led the initial research and development of an **IoT home security product** from ideas to PoC. Launched as CareVision with a **Kickstarter** campaign.
- Conceptualized and implemented new features into existing **desktop software and firmware** for 3D printers.

Software/Product Developer

EZ3-India (Startup)

April 2015 - March 2016 Bengaluru, India

- Involved in **open-source** development, testing, and deployment of 3D printer software and firmware along with the cloud based web apps.
- Represented the company at various exhibitions. **Hosted educational talks** about 3D-printing for students and corporate companies.

Interests

Panorama Photography Algo-trading Lucid Dreaming Cricket

Indian Classical Music 3D-printing Power-lifting Books

Domain

Python Static Code Analysis
Applied Machine Learning
Literate Programming Security

Education

Master of Science in Computer Science

Paderborn University, Germany | 2020 | Grade: 1.5

- Project Group: Management of Services Across Multiple Clouds** | Grade: 1.0
Led a team of 8 master students for 1 year as part of project work at the university.
- Seminar: Cryptography, Secure Systems Engineering** | Grade: 1.0, 1.7

Bachelor of Engineering in Computer Science

Visvesvaraya Technological University, India | 2015 | Grade: First class

Skills

- Linux | Object-oriented design | System design | Rapid prototyping | Test-driven | Scripting
- Python (*fluent*) | C/C++, Java, Js, PowerShell (*prior experience*)
- Git | Docker | LaTeX | Agile/Scrum | Office tools | ML Frameworks
- REST | MQTT | Flask | FastAPI | Postman

Personal Projects

Algorithmic Trading Bot

Automated trading in crypto and stock markets for Binance, Kite, and Lemon.markets.

RTCHub | ML Home Monitoring

Firmware, Middleware, Cloud, App. Complete solution built from scratch.

More on my [homepage](#)

Recent Publications

Enhancing Comprehension and Navigation in Jupyter Notebooks with Static Analysis | *IEEE SANER 2023 (CORE A)*

Automated cell header generator for Jupyter notebooks | *AI and Software Testing/Analysis 2021 (CORE A)*