

ANANTA SHAHANE



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Nagpur
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Hackerrank

M.S. Computer Science

EDUCATION

2021 – 2023	Masters of Science Computer Science—Foundations of Computing A Corridor Model Evolutionary Algorithm for Fast Converging Green Vehicle Routing Problem. Published <i>Courses:</i> Quantum algorithms, evolutionary & combinatorial algorithms, multimedia systems, software testing & verification, robotics, modern game AI, computational models & semantics, deep learning, embedded systems.	Leiden University, The Netherlands 7.50
2014 – 2018	Bachelor of Engineering Computer Engineering <i>Thesis:</i> A Scalable Broker Model for Micro-Service Orchestration. <i>Courses:</i> OOP, microprocessor architecture, OS, data structure and algorithms, computer graphics, DSP.	Pune University, India 64% 90%

SKILLS

Languages	Swift, C++, Python, Golang, Markdown, C, bash, \LaTeX
Frameworks	SwiftUI, Qt, HTTPS, json, Cirq, Openfermion, Scikit-learn, Keras, Docker, gdmc, SQL, git
Operating Sys.	macOS, Fedora, Asahi Linux, Ubuntu, RHEL (RH066x Certification)
Editors	Visual Studio Code, XCode, Zed

PROJECTS AND RESEARCH EXPERIENCE

Dec 2022– Aug 2024 Master Thesis	A Corridor Model Evolutionary Algorithm for Fast Converging Green Vehicle Routing Problem Y. Fan, LIACS Developed a geometric heuristic which helped introduce <i>Corridor Model</i> to the <i>Vehicle Routing Problem</i> (VRP). Introduced an initializer that outperformed K-means clustering by 30% while being computationally cheaper. Achieved 10% faster convergence and reduced hyperparameters from 10-12 to 2-3. Research published in ACM Journal by GECCO 2024; Melbourne, Australia . Evolutionary Algorithms / Swift / Python / OOP / pyM00 / NSGA-II	
Jan 2023 – Apr 2023	Embedded Edge Detection Optimized FPGA software for real-time edge detection using Xilinx hardware. Utilised only 66% of the expected KPN channels boosting performance by 28%. Sobel / C / Daedalus / FPGA Programming	Dr. T.P. Stefanov, LIACS
Sept 2022– Dec 2022	Genetic Algorithms for Neural Network Architecture Search Designed genetic algorithm for searching Deep Learning Architecture for image detection. Discovered links between network-depth and crossover operators, improving convergence speed & stability. Python / nasbench / Evolutionary Algorithm / Deep Learning / iOH Analyser	Dr. Hao Wang, LIACS
Sept 2022– Dec 2022	Robotics Perception Box Developed a Temporal K-Nearest Neighbors algorithm to distinguish walls from furniture using LiDAR data. Optimized CPU utilization, enabling faster processing and precise actuation of the robot motors. Python / Machine Learning / Coppeliasim / Trigonometry	Dr. E.M. Bakker, LIACS
Jan 2022– Apr 2022	Applied Quantum Algorithms Explored Randomised Measurement Toolbox or Classical shadows and its diverse applications. Validated implementation accuracy on applicability on Icing lattice for super-conductivity. Python / cirq / openfermion / numpy	Dr. Vedran Dunjko, LIACS

WORK EXPERIENCE

2018-2022	Apple Platforms Developer Developed, published and supported a cross platform app Today Productivity on iOS, iPadOS and macOS. Boosted productivity of 23 customers using latest <i>Apple Technologies</i> . Xcode / Swift / SwiftUI / RDBMS / CloudKit / WidgetKit / WebDev	Freelance
2017-2018	Software Engineering Intern Built a scalable proxy for the Gilmour micro-service broker system, enabling multi-language API support. Managed 100+ micro-services under load with a single Redis instance. Golang / Micro-Services / Docker / Prometheus / Grafana / CAdvisor / HTTP / json	Oogway Consulting

MISCELLANEOUS

2017-2024	Conferences Free Open Source Software Meet (2018), try! Swift Bangalore (2017), GopherCon 2018, Kernel Meetup 2017-2018, Google Meetup 2018, Quantum Games (2023), Quantum Amsterdam (2023), GECCO 2024 Melbourne Australia*.	
2019	Fundamentals of Red Hat Enterprise Linux (RH066x) Awarded for 100% completion of course, with 8 assignments, 6 weeks.	edX
2017	Networking and Security in iOS Applications Awarded for 98% grade of course, spanning 4 months and 16 assignments.	University of California, Irvine via Coursera
2013-2014	Certificate of Excellence in Physics Awarded for Excellence in Physics by the British Council International School Awards (1 st / 120).	Center Point School
2010	National Cyber Olympiad Scored #1,896 (91 percentile) in National Olympiad.	National Olympiad Foundation, India
Achievements	Scores ToEFL: 101/120 GRE: 316/340 (Quant: 167, Verbal: 149) Hackerrank: 5 ★ in C++ Problem Solving Python SQL C	

LANGUAGES

English - proficient
Marathi - native
Hindi - native
Dutch - learning

ACTIVITIES

Trekking: Completed 180 km trek to Pindhari Glacier in 5 days. **Gaming:** Placed 17th out of 107 in national Tekken 7 DOJO event (2020). **Tinkering:** Built custom PCs and Raspberry Pi projects. **Cycling:** 3,400+ km logged. **Music:** Jazz, City Pop, Rock. **Olympiads:** Consistently top 8 performing students in school in National Olympiads. **Intellectual:** Passionate about Physics and Mathematics.
