

Md. Fatin Shadab Turja

Pythonista, Software Engineer & Researcher

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PROFESSIONAL SUMMARY

Mission-driven Pythonista, Software Engineer, and Researcher dedicated to **Tech for Good**—leveraging Pythonic architecture to build purposeful digital ecosystems that simplify human life. Currently contributing to a modernization project for the **Bangladesh Military Museum**, I specialize in merging **gamification** with high-impact software to solve societal challenges. A four-time **Python Champion**, multi-time **National Hackathon Winner**, and IEEE-published researcher (**GreenScore**), my work is driven by a commitment to creating sustainable, ethical, and meaningful technology that empowers communities and serves the nation.

EDUCATION

- **United International University (UIU)** Dhaka, Bangladesh
Bachelor of Science in Computer Science and Engineering June 2022 – Expected June 2027
 - **Academic Standing:** CGPA: **3.44 / 4.00** (102/137 Credits Completed). Recipient of multiple merit-based scholarships and 100% tuition waivers based on semester performance.
 - **Core Focus:** Specializing in Emerging Networks, Energy-Efficient Software (Green Coding), and Blockchain; consistently ranked in the top percentile for algorithmic and project-based courses.
- **Govt. Tolaram University College** Narayanganj, Bangladesh
Higher Secondary School Certificate (HSC), Science July 2019 – July 2021
 - **Achievement:** Achieved a perfect **GPA 5.00 / 5.00**. Demonstrated excellence in Mathematics, Physics, Chemistry, Biology and ICT, providing a strong analytical foundation for undergraduate engineering studies.

SKILLS SUMMARY

- **Languages:** Python (Expert), C, C++, Java, SQL, PHP, JavaScript, HTML/CSS, Latex, AppScripts, MySQL
- **Frameworks:** Django, Pygame, OpenCV, Flask, Selenium, BeautifulSoup4, Bootstrap 5, JavaFx, Pandas
- **Tools:** GIT, SQLite, Arduino IDE, Godot, Unity, VS-Code, G Suite, IntelliJ, Cursor, Canva, Jira
- **Platforms:** GitHub, Ubuntu, Windows, Raspbian, Pythonanywhere, Firebase, Google Colab, Overleaf, Heruko
- **Soft Skills:** Problem Solving, Prompt Engineering, Open Source Contribution, Research, Kanban, Teaching

EXPERIENCE

- **Bangladesh Military Museum (Consultancy Project)** Dhaka, Bangladesh
Technical Consultant & Developer (UIU CSE Team) Nov 2025 – Present
 - **Digital Transformation:** Conducted site assessments for 5 national galleries to identify 33 infrastructure bottlenecks; contributing to a modernization roadmap.
 - **Software Development:** Active developer in a 3-sprint cycle, building specialized software solutions and hardware-software integrations to resolve operational museum challenges.
- **Phitron (Programming Community)** Dhaka, Bangladesh
Java Course Instructor (Open-Source Project) Jan 2025 – Present
 - **Curriculum Design:** Designing and delivering a comprehensive Open-Source Java roadmap for 50,000+ community members, tailored for Diploma and B.Sc. Computer Science students.
 - **Technical Instruction:** Developing high-quality educational content covering core Java, Object-Oriented Programming (OOP), and industry-standard coding practices.
- **Center for Development of IT Professionals (CDIP), United International University** Dhaka, Bangladesh
EdTech Research & Development Intern (Part-time) Sep 2025 - Feb 2026
 - **Curriculum Design:** Designed and structured IT-focused course modules, focusing on learner analysis and digital education initiatives.
 - **Research Assistance:** Contributed to UGC Bangladesh-funded Heat and ICSETEP research project proposals, gaining hands-on experience in educational technology and research methodology.
 - **Program Evaluation:** Assisted in the evaluation of program effectiveness and the implementation of technical training workflows.
- **Glorious Bangladesh** Dhaka, Bangladesh
Assistant Developer Intern (Internship) Aug 2021 - Oct 2021
 - **Full-Stack Development:** Built and maintained web applications using Django, Python, and Bootstrap, ensuring high performance and scalability.
 - **Interface Design:** Developed responsive and user-friendly front-end interfaces using HTML, CSS, and JavaScript.
 - **Team Collaboration:** Collaborated with the development team to implement functional features and streamline web development workflows.

HONORS AND AWARDS

- **1st Runner-Up, FYDP-I Category: UIU CSE Project Show (Fall 2025) — Feb 2026**
 - *Recognized for the initial phase of Final Year Design Project among 50+ graduating teams for technical feasibility and innovation.*
- **2nd Runner-Up, National Hackathon on Combating TF-GBV (BNNRC & APC) — Feb 2026**
 - *Developed a tech-driven solution to mitigate Technology-Facilitated Gender-Based Violence in a national-level hackathon.*
- **4th Position (Finalist), National NextGen Hackathon 2025 (IIUC) — 2025**
 - *Ranked in the top 4 out of 200+ teams from 50 universities nationwide; represented **Team UIU OrBirt** in a high-intensity innovation challenge.*
- **Research Grant Recipient (IAR-2025-Pub-047), Institute for Advanced Research (IAR) — Sep 2025**
 - *Awarded for "Python Under the Microscope"; developed the **GreenScore** metric to evaluate energy efficiency, resulting in an **IEEE Access** publication.*
- **Cohort Member, Innovation LaunchPad (UIHP@UIU) — 2025**
 - *Selected for the "Code Wizardry" project cohort to receive mentorship and resources for scaling a high-impact EdTech solution.*
- **1st Runner-Up, Intra-Varsity Blockchain Competition — 2025**
 - *Led **Team Ogro-Prjukti** to a podium finish by designing a blockchain-based supply chain solution for agricultural food security in Bangladesh.*
- **Selected Developer, AppCity (GP Academy) — 2025**
 - *Validated the "ArtistBuddy" collaborative art platform idea, gaining approval as a developer within the Grameenphone ecosystem.*
- **Top 30 Finalist, National Blockchain Olympiad Bangladesh — 2025**
 - *Represented **Team Decipher**, designing a blockchain-based supply chain solution for agricultural food security in Bangladesh.*
- **Champion, Python for AI & ML (Season 5, 6 & 7) — 2023 - 24**
 - *Achieved back-to-back 1st place finishes in programming contests held across three seasons of intensive AI/ML workshops.*
- **Champion, UIU CSE Project Show (Fall 2023) — 2023**
 - *Awarded 1st place for developing an innovative software solution judged on code quality, UI/UX, and real-world utility.*
- **Champion (Python), Cisco 4IR Learning Challenge — 2023**
 - *Secured 1st position in a national learning challenge focused on Python's role in the 4th Industrial Revolution.*
- **Recipient of Multiple Merit-Based Scholarships — 2022–2025**
 - *Maintained consistent academic excellence, securing 100% and 25% tuition waivers throughout the undergraduate program.*

PROJECTS

- **Django UDP Discovery Ecosystem (Networking, Open Source, Distributed Systems):** A suite of Python packages (Server & Client) providing zero-configuration, thread-safe server discovery on local networks with multi-interface support and 100% test coverage. Tech: Python, Django, Socket Programming, PyPI, GitHub Actions (October '25)
- **UIU CSE FEST 2025 Official Website (Web Development, UI/UX Design):** Co-developed the initial prototype and engineered a high-traffic registration system optimized for simplicity and accessibility. Focused on seamless user experience (UX) and backend scalability for one of the university's largest technical events. Tech: Django, Python, HTML/CSS, JavaScript, UI/UX (2025)
- **Project Nirvhoy: AI-Blockchain Forensic Vault (Cybersecurity, Blockchain, AI):** Developed a national award-winning digital evidence ecosystem for TFGBV victims. Engineered a secure "Direct-to-Vault" capture system with SHA-256 hashing and AES-256-GCM encryption to ensure court-admissibility. Integrated a permissioned blockchain (ForensicLog) for immutable audit trails and AI-driven risk scoring for abuse categorization. Tech: Python, Django, Blockchain, SHA-256, AES-256, AI, JavaScript (February '26)
- **Wizard's Code Quest: Gamified Coding Education (JavaFX, Game Development, OOP):** An innovative 2D pixel top-down game designed to teach programming concepts through a magical quest narrative. Features a multi-user PvP mode where players duel using real-time MCQ-based coding challenges. Tech: Java, JavaFX, Socket Programming, Maven, FXML, OOP (August '25)
- **R.O.D - Real-Time Object Detection (Computer Vision, WebSockets, IoT):** Surveillance prototype integrating IP camera streams with a Django backend via WebSockets for low-latency object detection and real-time frontend updates. Tech: Python, Django Channels, Redis, OpenCV, YOLO, JavaScript, Bootstrap (January '24)
- **C-STRUCTURE (Data Structures, Open Source, Library Design):** A comprehensive collection of modular C header files for fundamental data structures like Singly and Doubly Linked Lists, developed for the UIU Developers Hub. Tech: C, GCC, Modular Programming (June '23)

PUBLICATIONS

- **Python Under the Microscope: A Comparative Energy Analysis of Execution Methods (Green Computing, IEEE):** Comparative evaluation of CPython, Cython, PyPy, and ctypes using a novel GreenScore metric for energy-efficient software engineering. Tech: Python, Cython, PyPy, ctypes, Statistical Analysis (November '25)
- **Python Energy Microscope Dataset (Open Source, Reproducible Research):** Open-access Kaggle dataset providing granular measurements of energy consumption and carbon footprint for Python execution methods. Tech: Python, Data Analysis, Sustainability Metrics (July '25)

VOLUNTEER EXPERIENCE

- **UIU Developers Hub (Official CSE Dept. Org)** Dhaka, Bangladesh
Founder & Community Manager Nov 2024 – Present
 - **UIU Hackday:** Conceptualized and executed the first 6-hour "Hack Marathon"; developed the unique theme, technical question set, and judgment protocols.
- **UIU Computer Club (UIUCC)** Dhaka, Bangladesh
Head of Programming Department Nov 2022 – Sep 2025
 - **Event Leadership:** Organized **CSE FEST 2025** (National) and **Coders Combat 4.0** (Intra-University); restructured department into 3 wings and mentored 100+ members.
- **Google Product Experts Program** Remote
Product Expert (Google Drive & Gemini) Aug 2025 – Present
 - **Contribution:** Achieved 32 Recommended Answers resolving complex technical issues in Gemini and Drive communities; currently at 40+ active points.
- **UIU App Forum** Dhaka, Bangladesh
Technical Instructor (Game Development) Feb 2024 – Present
 - **Workshop Leadership:** Led the "GD4B" (Game Dev for Beginners) workshop, instructing 50+ students on 2D game mechanics, Grid Systems, Collision Logic, and OOP using Python and Pygame.
 - **Technical Authorship:** Authored the first comprehensive Bangla-language technical blog on Game Loops and Pygame to bridge the gap in localized educational resources.
- **UIU Finance Forum (UIUFF)** Dhaka, Bangladesh
Treasurer & Co-Head of Training Jun 2022 – Sep 2025
 - **Management:** Managed operational budgeting and financial compliance while leading training modules for 100+ active learners.

CERTIFICATIONS

- **Prompt Engineering: Smarter Use of AI for Everyone (RaiDOT):** Advanced certification focusing on LLM optimization and strategic prompt design patterns. (August '25)
- **Single Day Masterclass: Python Basics (UniAthena):** Intensive masterclass covering core Python architecture, fundamental syntax, and execution models. (Nov '23)
- **Java (Basic) Certificate (HackerRank):** Validation of core Java proficiency, object-oriented programming, and algorithmic problem-solving. (August '23)
- **Introduction to Cybersecurity (Grameenphone Ltd):** Fundamental training in network security, threat mitigation, and data protection strategies. (December '22)
- **PCAP: Programming Essentials in Python (Cisco Networking Academy):** Professional credential covering advanced Python data structures, file processing, and exception handling. (November '22)
- **Python (Basic) Certificate (HackerRank):** Certified proficiency in Python syntax, basic data types, and functional programming. (November '20)

REFERENCES

Dr. Suman Ahmmed

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