Parth Mittal

Pursuing BS in Computer Science — Cornell University

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Experience

Founder & CEO *HR, India*
PrivatePandaCO | Automated Algorithmic Trading Systems *Sep 2022 – Present*

- Founded PrivatePandaCo, providing SAAS development & consulting services for algorithmic trading
- Developed a suite of advanced trading bots designed for high-frequency trading and market analysis.
- Utilized in-depth knowledge of the TCP/IP stack and OSI model to implement low-level socket programming.
- Achieved execution speeds averaging 20 ms, with peak performance at 9 ms, surpassing industry standards.
- Created algorithms employing Exponentially Weighted Moving Averages and second derivative analysis.

Cyber250 Project - National Lead *New York, U.S.A.*
U.S. Space Force - i5 *Nov 2024 - Present*

- Led the development of the Cyber250 course, an advanced hands-on cybersecurity training program under i5 Space in conjunction with the U.S. Space Force's Space Training and Readiness Command (STARCOM).
- Managed a team of contributors, coordinating curriculum development while handling Controlled Unclassified Information (CUI) securely to deliver comprehensive cybersecurity education to students nationwide.
- Collaborated with professionals to ensure course content aligns with current defense cybersecurity standards.

Projects

Networks Lead - Wirefree Comms *New York, U.S.A.*
MIT Lincoln Lab - Socom Ignite *Sep 2024 – Present*

- Played a key role in a Department of Defense-sponsored project focused on developing a secure short-range radio transceiver tailed for various military applications, ensuring robust and reliable communication.
- Led networks development, innovating communication protocols and spec to enhance security and reliability
- Worked extensively with microcontrollers and hardware components, including Raspberry Pi models (4B, Pico, Zero 2W, Teensy, Adafruit Feather RP2040), PN532 NFC modules, and NRF24L01 transceivers.
- Constructed a makeshift Faraday cage utilizing 3D printing techniques and aluminum foil for proof-of-concept demonstrations, effectively isolating signals and preventing external detection

Research Lead *New York, U.S.A.*
Veritasim - Personal Project *Aug 2022 - Present*

- Conducting independent research to develop a hyper-realistic world simulation engine.
- Developing realistic accurate designs for objects and environments using algorithms like ABM and MDPs.
- Aiming to model complex variables and interactions to understand global dynamics, observe the butterfly effect and serve as a research platform for AI behavior and usage/execution/development.

Sole Developer *HR, India*
Public Python Libraries | Pyloggor, KucoinPy, KucoinOBM *Oct 2022 - Jul 2023*

- Developed several precise applications ranging from pretty printing to high frequency trading.
- Simplified the maintenance of live trading data by developing Python libraries that manages complex exchange communications and provides a Unix domain socket interface for seamless data streaming.
- Rapid adoption post-release with 1k+ downloads within a week of release and 50k downloads lifetime

Skills

Systems: Linux Proficiency, Networking, Cryptography, Penetration Testing, Secure Programming Practices

Languages & Technologies: MicroPython, Python, Java, Flask, FastAPI, Selenium, Docker, SQLite

Soft Skills: Leadership, Communication, Critical Thinking, Organization