Rahul Bajaj, PE

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Objective:

Computer Science student and multi-time hackathon winner seeking to transition into a web3 development role.

Experience:

Pesto, Founder / Smart Contract Engineer / Business Development - pesto.finance **Mar 2024 – Present**

- Spearheading the integration with Perseus, a leading DEX on Metis L2 chain.
- Leading business development efforts by fostering strategic partnerships (PsiFi, Linea, Metis).
- Developing and executing on the go-to-market strategy for Q2 2024, focusing on enhancing Pesto's visibility, increasing Twitter and blog reach, and driving user adoption.
- Cultivating relationships with VCs to secure partnerships and investments.

xSafe, Founder / Smart Contract Engineer / Business Development - xsafe.chainrule.io **Sep 2023 – Dec 2023**

- Developed multi-chain deployment service to enable users to deploy smart contracts on various chains at the same address with one click.
- Created a Create3 Factory Contract for deploying contracts predictably across chains.
- Designed a backend service using REST API for gathering and verifying event data from blockchains.
- Led business development initiatives, secured partnerships, managed the Telegram developer support group and drove engagement across social media to bolster brand presence and adoption.

PFS TECO, Cottage Grove, WI, USA, Staff Engineer **Jul 2020 – Present**

- Provide structural engineering and design review of 3D printed and modular buildings across the US.
- Oversee plan review reports, inspection reports and approvals for PFS plan reviewers and inspectors.
- Review plans, engineering calculations and technical reports for compliance with building codes (IBC, NEC) and engineering standards (ASTM, AISC, ASCE).
- Conduct in-plant inspections of modular buildings to ensure code compliance and issue approvals.
- Provide information and technical assistance to PFS plan review staff and customers.
- Train PFS staff on Plan Review, Inspection, and Code Requirements.
- Customers include Amazon, Intel, Facebook, Google, Starbucks.

Projects:

Auto-HODL, ETHDenver 2024 - https://devfolio.co/projects/auto-hodl-e5dd **Feb 2024 – Mar 2024**

- Developed Solidity smart contracts for Auto HODL, “Acorns for web3”, automating token savings in blockchain transactions, aimed at promoting financial prudence within the DeFi ecosystem.
- Conducted smart contract audits to ensure security and reliability of the Auto HODL platform.
- Assisted in the integration of technologies like MetaMask Snaps for future expansion and user experience enhancement of Auto HODL.
- Winner of “🥇 Injective - Building with Injective inEVM”, “🥈 XDC Network - Open: Most creative BUIDL using the XDC Network”, “🥉 Base – Best Consumer App”, and “Linea – Build on Linea”.

xPay, Foresight X Hacker House Istanbul, Turkey - ethglobal.com/showcase/xpay-jxgmv **Nov 2023**

- Developed a solution to bridge real-time, off-chain data (e.g. gas prices from other chains, real-world prices) on-chain in a verifiable, fast, and efficient manner.
- Developed Python scripts to fetch real-time data for cross-chain functionalities, including gas prices and currency exchange rates, ensuring secure integration with blockchain through smart contracts.
- xPay enables the user to pay gas on only one chain and execute transactions on other chains/off-chain.
- Authored and deployed Solidity smart contracts along with a user-centric front-end in TypeScript.
- Winner of “🥉 Gnosis – Best EVM Migration Tool”, “Arbitrum Pool”, and “Deploy on Scroll” prizes.

xSafe v1, ETHGlobal New York, USA - ethglobal.com/showcase/xsafe-bbj01 **Sep 2023**

- Designed a solution optimizing Gnosis Safe multi-sig for cross-chain transactions, streamlining identical admin functions across blockchains.
- Developed features for single signature propagation and transaction broadcasting, reducing time and complexity in multi-chain operations.
- Implemented a chain-agnostic design, making X-Safe compatible with any chain supported by Safe.
- Winner of "🏅 Safe – Best Use of Safe{Core}" and "🏆 ETHGlobal New York 2023 Finalist" prizes.

Collaptz, ETHGlobal Waterloo, Ontario, Canada - ethglobal.com/showcase/collaptz-623pz **Jun 2023**

- Developed "Collaptz" project, utilizing Risc Zero's zkVM to verify Collatz sequences using distributed computation, addressing the Collatz conjecture in mathematics.
- Created a trustless compute system to calculate Collatz sequences, provide proofs for computations, and securely store results in a public database.
- Winner of "🏅 Risc Zero — Best Use of Bonsai" prize for innovation and problem-solving.

Turbo Trax, a car-racing video game (Personal Project) **Jan 2023 – May 2023**

- Developed and designed Turbo Trax, a 3D video game for Windows and MacOS, using Unity.
- Implemented game physics and car mechanics in C# to create an engaging player experience.

Machine-Learning Based Stock Trading Algorithm (Personal Project) **Sep 2021 – Jan 2022**

- Created a machine-learning based trading algorithm to maximize portfolio return.
- Algorithm was trained on market indicators such as Sharpe Ratio and Bollinger Bands.
- Learner was built as a Bootstrapped Random Tree Learner, used NumPy, Pandas for data processing.
- ML-based strategy delivered a return of 129% over a period of 2 years, compared to -4 % for a Buy-and-Hold strategy and 39% for a manual trading strategy.

Education:

Georgia Institute of Technology, Atlanta, GA, USA **Aug 2021 – Present**
M.S., Computer Science GPA 4.00 / 4.00

Purdue University, West Lafayette, IN, USA **Graduated in May 2018**
B.S., Mechanical Engineering GPA 3.46/4.00
Awards & Scholarships: Semester Honors, Dean's List, "Purdue Moves" Scholarship

Shanghai Jiao Tong University, Shanghai, China (Study Abroad) **Jan 2017 – May 2017**

Engineering Coursework:

- Machine Learning (Supervised Learning, Reinforcement Learning, Neural Networks)
- Software Development Process (OO, Software Architecture, White and Black-Box Testing, Agile)
- Computer Networks (Network Routing, Router Design and Algorithms, Software-Defined Networking)
- Data Structures (Linear Data Structures, Trees, Graphs, Abstract Data Types)
- Algorithms (Searching and Sorting, Types of Algorithms, Branches)
- Operating Systems (System Structure, Processes and Threads, Memory Management)

Skills:

- Programming Languages: Python, C, Java, HTML, CSS, TypeScript, Solidity
- Software: Jupyter Notebook, Linux, Oracle Database, Git.
- Others: REST API, Pandas, SciKit Learn, Numpy