CURRICULUM VITAE OF OVIA SESHADRI

Head of DevRel, Okto by CoinDCX, Remote

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EDUCATION

Doctorate of Philosophy (PhD) in Computer Science   *July 2015 - May 2023*
Indian Institute of Technology Delhi(IITD), New Delhi, India   CGPA: 8.25/10
Advised by Dr Vinay Ribeiro (IITB) and Dr Subodh Sharma (IITD)
Department of Computer Science and Engineering

Thesis Summary - *Securely Improving Performance in PoW Blockchains using Links and Anchors:*
We reduce the trade-off between security and performance in PoW blockchains through our novel
concepts of *Links* and *Anchors*. They are small, fast and frequent structures that can be incorporated
on any new or existing PoW blockchains. They help reduce the confirmation time of their underlying
blockchain while preserving its consistency security guarantees.

Developer Relations University Cohort 5   *May 2024 - June 2024*
Accepted into and attending the Devrel university in Web3 6 week virtual cohort developed by top
developer advocates in the web3 ecosystem. Trusted by 180+ students across 42 countries.
URL- https://devreluni.com

M.S. Software Engineering (5 year B.Tech. + M.S. Integrated course)   *July 2008 - May 2013*
VIT University, Vellore, India   CGPA: 9.16/10[†]
† Graduated in top 5% in a batch of 300+

WORK EXPERIENCE

Okto by CoinDCX, Bangalore + Remote, India   October 2022 - present
Head of Devrel   *February 2024 - present*

· Bootstrapped the DevRel vertical for Okto.
· Designed and created okto docs from scratch using the Fumadocs (docusaurus) framework - Okto Docs.
  My github work profile - oviawork
· Worked closely with product and Engineering. Provided solution engineering and support to 13+ large
  scale partners (100k + users) in Q4 2024, out of which 5 moved to production.
· Managed the end to end development and release of 4 SDKs on Okto - React, React Native, Flutter
  and Unity
· Built several educational material including template applications in react, react Native and flutter for
  okto sdk for easier developer on boarding.
· Conducted several workshops, seminars, spaces to build okto brand visibility among the developer
  community. Bootstrapped the dev community for Okto on Discord and Telegram.
· Diverse responsibilities ranging from Developer community building for the okto orchestration layer, a
  developer education, technical speaking, content creation, new chain and protocol explorations, Product
  and Business development
· Responsible for the organization of CoinDCX's flagship Hackathon Unfold24, Asia's largest multi-
  protocol hack, where I oversaw entire planning, execution and post hack engagement. We received 8k+
  applications, 600+ hackers, 200+ project submitted.
· Managed a large group of external devs who help build small components for Okto.

Research Engineer *October 2022 - January 2024*

· Diverse responsibilities ranging from Technical Explorations, Building Proof of Concepts, New Protocol Integration, Developer Support, Product research, Tech solutioning, design and architecture and their optimisations.

· In charge of studying feasibility and integration PoC of 6+ EVM chains, Aptos, Cosmos, Solana on the Okto platform

· Built a Web3 curriculum and project assignments for the training of all engineers on blockchain and Web3.

· In charge of the technical documentation with respect to Okto. Part of the whitepaper for Okto orchestration platform.

Aleo Foundation, Remote, Part-time February 2024 - March 2024
DevRel Ambassador

· Bring awareness about Aleo to the regional tech communities of India

· Develop educational resources on Aleo and the Leo Programming Language

· travel to conduct meetups and Technical workshops on Aleo

Aris Global Software Pvt. Ltd., Bangalore, India July 2013 - June 2015
Principal Software Engineer

· Promoted to Principal Software Engineer from Senior Software Engineer from Dec 2014 based on performance in the project.

· Worked on Project "agHub" which is a DWH solution for safety systems. It is a data mart which efficiently stores safety data for reporting purposes.

· Was designated the role of data modeler and developed a dimensional model of the DWH. Involved in the development of ETL jobs to trafer data from RDBMS to DWH. Involved in lending support to reporting teams working on BO and COGNOS.

· Involved with customers on discussions related to requirement analysis and issue resolution. Provided support to the testing and QC team in understanding the project setup and project overview.

NON-PROFIT INITIATIVES

- Director of **The Phoenix Guild Chennai Chapter**- a non-profit that aims to onboard the next billion diverse builders on Web3. Since Feb 2023, I have built a community of 700+ enthusiats in Tamil Nadu, India. Since July 2022, under this banner, I have delivered countless technical talks, and workshops, been invited to panels, and organized events in Web3.
  URL- https://twitter.com/TPG_Chennai

- H.E.R. DAO India advisor. Helped found and manage the H.E.R. DAO India Chapter.

RESEARCH INTERESTS

Blockchain, Web3, Cryptography, ZK, Consensus

RESEARCH PUBLICATIONS

- "Securely Improving Stability and Performance of PoW Blockchains using Anchors", **Ovia Seshadri**, Vinay J, Ribeiro and Shadab Zafar, COMSNETS 2022.
  URL- https://ieeexplore.ieee.org/abstract/document/9668572

- "Extended Analysis on Anchors", **Ovia Seshadri**, Vinay J, Ribeiro and Shadab Zafar, arxiv 2022.
  URL- https://arxiv.org/submit/4366244/view

- "Securely Boosting Chain Growth and Confirmation Speed in PoW Blockchains", **Ovia Seshadri**, Vinay J, Ribeiro and Aditya Kumar, IEEE Blockchain 2021.
  URL - https://ieeexplore.ieee.org/abstract/document/9680576

PATENTS

- "Method in blockchain systems for fast stabilization and increased responsiveness using Anchors", Vinay J. Ribeiro and Ovia Seshadri,
  Patent submitted in India (2019) (Application Number - 201911004921)
  Patent submitted in USA (2021) (US20220108313A1; US17/428,304)
  International PCT (2019) - WO2020161530A1
  URL - https://patents.google.com/patent/US20220108313A1

- "Method in blockchain systems for fast stabilization and increased responsiveness using Links", Vinay J. Ribeiro and Ovia Seshadri,
  Patent submitted in India (2020) (Application Number - 201911023814)
  International PCT (2020) - WO2020254923A1
  URL - https://patents.google.com/patent/WO2020254923A1

SELECTED TALKS AND WORKSHOPS

- Invited to deliver a talk and speak on a panel at Oxford Blockchain Conference 2024 at Oxford University, UK, March 2024 - URL:Oxford Blockchain conference; Mentored at ETHLondon in London Blockchain Week, London, UK in March 2024 - URL:ETHLondon Mentors

- Invited to conduct technical sessions for Women Who Code Blockchain including seminars on Filecoin virtual machine, ZK Proofs - ZKSNARKS. I also conducted a 5-week hands-on Solidity boot camp for Women Who code Blockchain in June - July 2023. URL - Solidity Bootcamp, FVM Seminar, ZKSNARKS

- Invited by Hyperledger Foundation to be part of the speaker portfolio consisting of globally renowned women speakers and to deliver a technical talk for their Hyperledger India Women in Web3 conference in June 2023. URL - Hyperledger Women in Blockchain

- Invited to present a lecture for the speaker sessions of Unit Masters. Gave a talk titled "Arriving at a Consensus in a global distributed world" in December 2022. URL - Unit Masters Speaker Session

- Invited to present a talk "Securely improving the performance of PoW blockchains using anchors" at Workshop on Blockchains and Networking at ACM Sigmetrics 2022 in Mumbai in June 2022.

- Invited to present a talk "Mechanisms for improved security and performance of PoW Blockchains" at the National Research Evaluation Workshop of the Vishvesvaraya PhD scheme for electronics and IT by the Ministry of Electronics and Information Technology (MeitY), Government of India in Chandigarh in July 2019.

- Invited to present a talk on "Near real-time consensus using Hashgraph in IoT systems" at the 5th International Workshop on Cyber security in Kyushu University, Fukuoka, Japan in July 2017.

INTERNSHIPS

- IBM IRL, Bangalore from July to October 2017, on project titled "Blockchain like Relational Database" under Dr Praveen Jayachandran. Details in Research project section.

- Aris global Pvt. Ltd., Bangalore from January to June 2013 on Project titled "AgCarbon - A platform of highly scalable and reusable components for Life Sciences Industry" under the guidance of Anish Anand.

RECENT CONFERENCES AND WORKSHOPS

- Recognised as a scholar by the Ethereum Foundation and invited as a fully sponsored researcher to attend DevConnect Istanbul 2023.

- Invited to attend Starknet Sessions as a fully sponsored scholar at Tel Aviv, Israel in February 2023.

- Invited to chair the session on Blockchain and Privacy at Comsnets 2023 in January 2023 in Banglaore.

- Attended Deciper 2022 as a fully sponsored finalist for Algorand Pitch and scale competition in November 2022 in Dubai, UAE.

- Invited to attend IPFS camp by Protocol Labs as a fully sponsored scholar in Lisbon, Portugal in October 2022.

- Selected as fully Sponsored H.E.R . DAO scholar to participate in Algorand Greenhouse Developer Hackathon in Bali, Indonesia and Singapore in September 2022.

- Conducted the blockchain workshop as part of training for The Central Reserve Police Force (CRPF) on "Network Security and Cryptography" at IIT Delhi in April 2021.

HACKATHON PROJECTS

- **ChainCart - Submitted at EthLondon 2024**
  Bounties-Celo, Filecoin, Chiliz, Arbitrum : 5700USD
  Chain Cart is designed for use within the Opera Mini browser for Minipay. It aims to streamline the shopping experience by enabling users to scan product barcodes through their phones. Upon scanning, the app retrieves product information—such as the ID, name, price, and brand—from a decentralized database, listing the item in the user's virtual cart. The user can the directly checkout and pay for their shopping via crypto stables. URL : Submitted Project EthGlobal Link

- **Bet on Balls - Submitted at EthIndia 2023**
  Won top ten finalist position among 478 submissions
  Bounties-Scroll + 2000 USD + 2000 USD travel grant
  Bet on Balls is an on-chain sports betting marketplace. Specifically tailored for the vast cricket fanbase in India, Bet on Balls taps into the passion and fervour surrounding the sport. With traditional betting platforms often facing challenges related to trust and transparency, a Ben on Balls mitigates these concerns by recording bets on a secure and immutable blockchain. We use Oracle to fetch real-world data onchain. URL : Submitted Project EthGlobal Link

- **StarkForge - Submitted at EthIstanbul 2023**
  Bounties- Arbitrum
  A lending protocol on Starknet, seamlessly uniting Layer 1 and Layer 2 blockchain networks. Swift deposits, cross-border lending, collateralized loans
  URL : Submitted Project

- **DevMate - Submitted at EthOnline 2023**
  Bounties- Scroll, Selected for top 50 project
  DevMate revolutionizes the hackathon experience, providing a dynamic platform for hackers to forge powerful collaborations. Upon joining, hackers craft detailed profiles, outlining their skills, interests, and aspirations. DevMate pairs them with like-minded individuals, forming formidable teams poised for success.

URL : Submitted Project

- **xNFT Launchpad - Submitted at EthOnline 2022**
  Bounties- Connext
  This project is aimed at solving the problem of interoperability when it comes to NFTs. On a single click, you can deploy your NFTs into multiple chains of your choice.
  URL : Submitted Project

- **ZKYC - Prove legitimacy in secrecy - Submitted at Unfold 2022**
  Bounties-NEAR, Solana, Covalent and Push: 6400USD
  This project was submitted in Unfold2022- Build for Web3 Hackathon by CoinDCX in August 2022 at Bangalore. We provide an age verification Dapp for KYCs using zero-knowledge proofs. Verified proofs get a minted NFT. We deployed on Polygon, Solana. Used Filecoin/IPFS and Arcana for document storage. EPNS for notifications, Covalent for chain retreival.
  URL : https://devfolio.co/projects/zkyc-c6e5, GitHub repo

HONORS AND AWARDS

- EthGlobal's EthIndia 2023 top ten Finalist from among 478 projects - Submitted Project

- Ethereum Foundation Devconnect 2023 Scholarship recipient.

- A Visvesvaraya PhD fellow from July 2015 to July 2020.

- Sponsored Student of the Indo-Japanese research collaboration by the Indian and Japanese governments.

- Qualified UGC-NET National level Exam for Computer Science and Applications in June 2015.

- Qualified All India Graduate Aptitude Test Engineering(GATE) for Computer Science and Information Technology conducted by MHRD in March 2013 and in March 2015.

PEER REVIEWS

- Mentor at Eth Global Hackathons at EthIstanbul 2023, EthSingapore 2024 and EthBangkok 2024

- Reviewer for Transactions on Management Information Systems(TMIS) and Conference on COMmunication Systems & NETworkS (COMSNETS) and International Conference on Distributed computing and Networking(ICDCN)

RESEARCH PROJECTS

- **Anchors for stability, Security and performance of PoW Blockchains**
  Proof-of-work (PoW) consensus generates blocks at random time instants, and consequently, adds weight to the blockchain at these same instants. This unsteady increase in chain weight over time is the root cause of many security and performance problems in the form of forks. This work tries to prevent forks and reduce chances of selfish mining and double spend attacks in existing blockchain systems. This work has Indian and USA patents and an International PCT filing. It is published in COMSNETS 2022. An extended version is available on arxiv.
  Advisor: Dr Vinay Ribeiro, IIT Bombay

- **Links: Making PoW Blockchains robust via steady chain growth**
  A major short coming of PoW blockchains is their inability to scale to low confirmation times required for typical micro payments. The main reason for this is the unsteady growth in chain weight. This work proposes a simple solution where chain growth is maintained in a steady

manner and linear structure of the blockchain is maintained. We also lower confirmation times while maintaining security guarantees. Links are a better alternative to solutions that try to improve confirmation times by reducing block size and interval. This work has an Indian patent and has an International PCT filing. It is published in IEEE Blockchain 2021.
Advisor: Dr Vinay Ribeiro, IIT Bombay

- **Blockchain like Relational Database**
  This project was in collaboration with IBM IRL, Bangalore during July to October 2017. This project aimed to bring blockchain properties like immutability and decentralization into relational databases to make them more powerful for certain applications in supply chain management.
  Advisor: Dr Praveen Jayachandran, IBM IRL

- **Near real time consensus using Hashgraph in IoT systems**
  This project was a part of Indo-Japanese Research projects for communications in IoT Networks during January to July 2017. This project was part of "Work Package 3: Develop an application layer trusted framework" in a series of Indo-japanese collaborations. Here we built a prototype for a lightweight consensus protocol in IoT networks using Hashgarph with BFT consensus as opposed to the heavy PoW consensus.
  Advisors: Dr Subodh Sharma, IIT Delhi and Dr Kosuke Kaniko, Kyushu University, Japan

GRADUATE TEACHING ASSISTANT

Networks and System Security [SIL765][Spring 2017, Spring 2018, Spring 2019]

Special Topics in High Speed Networks: Blockchain [COL867][Fall 2017]

Computer Networks [COL672][Fall 2016, Fall 2018]

Introduction to Database Systems [COL632][Spring 2016]

Special topics in DB systems: Data Mining [CSL868][Fall 2015]

TECHNICAL SKILLS

Computer Languages	Solidity, JavaScript(full stack), Python, C++, SQL, Java
Software & Tools	LaTeX, MS Office
Technologies	Bitcoin, Ethereum

PERSONAL DETAILS

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Twitter	twitter.com/ovia_seshadri
GitHub	github.com/oviaseshadri work profile - oviawork
Learning Blog	learnwithovia

REFERENCES

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Department of Computer Science
Indian Institute of Technology Bombay (IITB)

Dr Subodh V. Sharma (PhD supervisor)
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Department of Computer Science
Indian Institute of Technology Delhi (IITD)

Yashaswi Rao (Reporting Manager)
Vice-President(Okto), Okto CoinDCX
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Henri Lieutaud (Mentor)
Head of Ecosystem, Starknet Foundation
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