KINSHUK PHALKE

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Education

Georgia Institute of Technology   **August 2021 - May 2024**
Bachelor of Science in Computer Science, GPA: 4.0   *Atlanta, Georgia*
- **Concentration:** System and Architecture, Intelligence
- **Relevant Coursework:** Algorithms Honors, Discrete Mathematics Honors, Linear Algebra Honors, Operating Systems, Systems and Network, Machine Learning, Artificial Intelligence, Statistics and Applications

Experience

Georgia Tech High Performance Architecture Lab   **Jan 2023 – Present**
Undergraduate Research Assistant   *Atlanta, Georgia*
- Working on In-Storage GPU scheduling strategies to maximize memory capacity and performance in GPUs.

NCR Corporation   **May 2021 – August 2021**
Software Engineer Intern   *Atlanta, Georgia*
- Created a shopping cart micro service in Go Fiber deployed onto GCP to enable carting on PoS devices and websites.
- Wrote core logic in CRUD operations of cart and service integration into NCR's BSP layer for related taxes, prices, store locations, promotions, returns and item attributes information and operations
- Wrote YAML deployment files for the Kubernetes cluster, adding scalability and multi-tenancy.
- Created a CI/CD pipeline to run testing suite, verify and publish deployments, publish artifacts onto GCP.
- Wrote a Bash script with 12 presets to change environment variables for different stages in production, run the Kubernetes cluster, create and update internal CA certificates and manage kubectl pods and deployments.

Notitia   **November 2021 – Present**
Software Engineer   *Atlanta, Georgia*
- Built a LDA model in Python, tuned UMAP parameters to achieve a 80% accuracy, implemented a clustering algorithm using FAISS, worked on UI of the WordCloud using React Flow.
- Optimized the frontend graph rendering by 60% and backend machine learning algorithm by 40%.

Projects

SpeechToCode   *Python, ReactJS, Node.js*
- Built a meta language parser in Python enabling spoken English to create functional JavaScript, Python or Java code.
- Used a visitor pattern, lexical scoping system, text based type inference system to create language output.
- Worked on integration with the speech to text machine learning flask server and designing the frontend in ReactJS.

DeusCL   *Rust, Common Lisp, Yew Framework*
- Built a memory-safe REPL in Rust using a handwritten recursive descent parser and a visitor pattern evaluator.
- Added a basic type inference, type checking, error handling system, lexically scoped garbage collector and a dynamic evaluation of functional environment and parameters.
- Built a frontend in Yew Framework in Rust to enable users to use a web based simulation of REPL.

Publixmon   *MongoDB, Express.JS, React Native, Node.JS, Flask, Node.js*
- Built a Web3 mobile app in React Native allowing users to play NFT trading game to boost retail engagement.
- Integrated with the NCR BSP layer for order, catalog, inventory details and generate an NFT based on user history.
- Built and tested mining NFTs on the Ganache Blockchain and built a node.js server to facilitate blockchain actions.
- Project won the first place at the NCR API Challenge at HackGT 8.

Enhance   *Python, Tensorflow, Keras*
- Created a Res-Net Implementation of the Super Resolution GAN Paper for Super Resolution in Tensorflow.
- Created residual blocks and skip connection, Used the VGG-19 model to calculate the content loss of the model.
- Achieved perceptible improvements in image quality on the DIV2K dataset with a downscale factor 4.

Technical Skills

Languages: Python, Rust, Go, JavaScript, Java, C, C++, C#, TypeScript, Solidity
Frameworks: ReactJS, Next.JS, NestJS, Astro, Express.js, Node.js, Flutter, React Native, Redux, Web3.js, Yew, Tauri
Machine Learning: Tensorflow, PyTorch, NumPy, Scikit-learn, Open AI Gym, Matplotlib, Pandas, Keras, NLTK
Technologies/Frameworks: Git, Linux, Docker, Postman, LaTeX, SQL, MongoDB, Redis, Kubernetes, Google Cloud Platform, AWS