KINSHUK PHALKE

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Education

Georgia Institute of Technology **August 2021 - December 2024**
Bachelor of Science in Computer Science, GPA: 4.0 *Atlanta, Georgia*
- **Concentration:** System and Architecture, Intelligence
- **Relevant Coursework:** Algorithms Honors, Discrete Math Honors, Datastructures and Algorithms, Object Oriented Prorgamming, Operating Systems, Systems and Networking , Machine Learning, Adv/HP Computer Architecture
- **Clubs:** President-dependently-typed

Experience

NCR Corporation **May 2023 – Present**
Software Engineering Intern Team Lead *Atlanta, Georgia*
- Lead a team of 5 interns in designing an end-to-end organization generation micro-service in Python, for SIT testing.
- Designed core logic in catalog generation from dataset, store location randomization and organization provisioning.
- Trained a NER model to recognize brands from products and a transformer model to generate product descriptions.
- Deployed API on Google Kubernetes Engine and designed a CI/CD pipeline to test and publish cluster.

Georgia Tech High Performance Architecture Lab **Jan 2023 – Present**
Undergraduate Research Assistant *Atlanta, Georgia*
- Developing hybrid SSD-GPU architectures and scheduling strategies to maximize bandwidth and performance in GPUs.
- Read papers proposing novel approaches to SSD scheduling, including ZnG, SBIOS, and PGIS.
- Explored the internal workings of MacSim and DRAM Simulator Code.
- Utilizing strategies proposed in papers to develop an outline of a warp-based SSD scheduling algorithm.

NCR Corporation **May 2022 – August 2022**
Software Engineer Intern *Atlanta, Georgia*
- Developed a shopping cart micro service in Go Fiber deployed onto GCP to enable carting on PoS devices and websites.
- Designed 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.
- Architected a CI/CD pipeline to run testing suite, verify and publish deployments, publish artifacts onto GCP.
- Automated using 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 for Topic Discovery capabale of ingesting 50K tokens, tuned UMAP parameters to achieve a 80% accuracy in dimensionality reduction, utilized FAISS in clustering, designed WordCloud UI using React Flow.
- Optimized the frontend graph rendering by 60% and backend machine learning algorithm by 40%.

Projects

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

SpeechToCode *Python, ReactJS, Node.js*
- Developed meta language parser in Python to create functional JavaScript, Python or Java code from spoken english.
- Implemented a visitor pattern, lexical scoping system, text based type inference system to create language output.
- Integrated with the speech to text machine learning flask server and designing the frontend in ReactJS.

Publixmon *MongoDB, Express.JS, React Native, Node.JS, Flask, Node.js*
- Developed 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.
- Tested mining NFTs on the Ganache Blockchain via a node.js server to facilitate Smart Contracts from the App.
- Project won the first place at the NCR API Challenge at HackGT 8.

Technical Skills

Languages: Python, Rust, Go, JavaScript, Java, C, C++, C#, TypeScript, Solidity, Bash
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, Matplotlib, Pandas, Keras, NLTK
Technologies: Git, Linux, Docker, Postman, LaTeX, MongoDB, Redis, Kubernetes, GCP, AWS