Vedant Bhat

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, College of Computing   **Atlanta, Georgia**
Master of Science in Computer Science   *May 2024*
- Specialization: Machine Learning; Scholarships: Terrill Graduate Fellowship, Zell Miller   GPA: 4.0

Bachelor of Science in Computer Science   *May 2023*
- Specialization: Artificial Intelligence and Information Internetworks; Scholarships: Zell Miller   GPA: 3.8
- Graduated with Highest Honors; Recipient of Faculty Honors; Georgia Tech Dean's List

SKILLS

- **Programming:** Java, Python, C, C++, SQL, JavaScript, HTML, CSS, NodeJS, NextJS, Git/GitHub
- **Tools/Libraries:** NumPy, Pandas, PyTorch, TensorFlow, Dependency Injection, Apache Spark, Docker, MongoDB
- **Technical Concepts:** Agile Development, Object Oriented Design, CI/CD, Data Structures and Algorithms, Relational Database Systems, REST API's, Multithreading, MapReduce, Introductory Information Security, Linear Algebra
- **Interests:** Artificial Intelligence, Machine Learning, Computer Vision, Computer Graphics, Natural Language Processing
- **Relevant Coursework:** Scientific Machine Learning, AI, NLP, Graduate Algorithms, Advanced Computer Graphics

EXPERIENCE

AMAZON   **Seattle, Washington**
Software Development Engineer Intern – Automated Media Production   *May 2022 – Aug 2022*
- Engineered an automated service to streamline the creation of a Visual Review (VR), an innovative advertising format within Amazon's retail catalog. Supported Amazon's Shop-By-Interest Initiative's rapid growth with ~1000 VRs per month.
- Architected and deployed an automated workflow that resulted in the dynamic generation of SVG images by programmatically combining a background SVG and a popular product review, reducing VR creation time by 99%.
- Optimized the rapid generation, storage, and deployment of VRs by leveraging AWS services, including API Gateway, Lambda functions, and S3 storage, resulting in a significant cost reduction due to reduced outsourcing of VR creation.
- Collaborated closely with graphic artists and content curators to devise an efficient strategy for dynamically generating SVG images in a lightweight, portable, and user-friendly manner by using Java's DOM API and Apache Xerces.

IBM   **RTP, North Carolina**
Software Engineer in Test Intern – DataPower   *May 2021 – Dec 2021*
- Automated a variety of tests using Java and integrated them into the Jenkins CI/CD pipeline to ensure that DataPower Appliances are functioning as intended and reduced manual testing time by approximately 120 hours on an annual basis.
- Orchestrated a comprehensive suite of tests to monitor the automatic scaling of DataPower Pods within Kubernetes by leveraging JMeter for performance testing, achieving a 96% success rate in detecting scalability issues.

FISERV   **Alpharetta, Georgia**
Software Engineer Intern – Debit Routing   *May 2020 – Aug 2020*
- Led the development of an intuitive, user-friendly simulation routing UI using Java for the backend and JavaFX for the frontend, streamlining the workflow for developers to create sample debit routes to test internal applications.
- Reduced the time it takes developers to create their own sample debit routes from multiple days to approximately 10 minutes by bypassing the need for a formal route request and allowing developers to manually set up their own debit routes.
- Orchestrated the implementation of a robust data persistence system by employing serialization techniques, enhancing the overall user experience by ensuring data integrity and system reliability.

PROJECTS

Ray-Tracing Renderer
- Built a distributed ray tracer from scratch in Java using the Processing library. Used acceleration techniques like Bounding Volume Hierarchies and kD-Trees to improve performance on 3D triangle meshes imported from the Stanford Computer Graphics Laboratory, resulting in near immediate rendering of scenes with over 5 million shapes.

Accelerated Graph Search Algorithms
- Imported Atlanta map data from OSM and processed it into a networkx graph. Implemented various search algorithms including Bi/Tri-directional A* search and submitted an accelerated algorithm using landmarks to a search competition.

Peer to Peer Game Sharing
- Developed a P2P game sharing application using PeerJS and WebRTC allowing users within the P2P network to either share or play games on another user's computer and maintained a latency of less than 100ms to support low lag game sharing. Hosted a recommender server via flask to suggest games for users to play using a cosine similarity matrix.