SHIKHAR GUPTA

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EDUCATION

M.S. Computer Science 08/2022 - 05/2024
Arizona State University, Tempe, Arizona GPA: 4.00
Courses: *Machine Learning, Natural Language Processing, Data Visualization, Data Processing at Scale, Data Mining*

B.S. Computer Science 08/2015 - 05/2019
PES University, Bangalore, India GPA: 3.74
Courses: *Artificial Intelligence, Web Development, Android Development, Data Structures and Algorithms, Cloud Computing*

PROFESSIONAL EXPERIENCE

Research Aide, School of Community Resources and Development, ASU, Tempe, US 08/2023 - Present
- Leading the development of a dashboard using React.js to provide a comprehensive view of climate and community, empowering users to build resilience and utilize actionable insights.
- Designing an interface featuring a GIS-based mapping and analytics tool using Leaflet with visualizations using D3.js.

Software Engineer II, Aruba Networks, Bangalore, IN 01/2019 - 07/2022
- Led the development of automated solutions resulting in an 80% reduction in person hours and accelerated product delivery.
- Restructured Linux-based monitoring and logging infrastructure using Logstash, Kibana, Filebeat, Grafana, and Influx DB, enhancing application performance visibility and reducing troubleshooting time by 50%.
- Engineered a Python-based tool for virtual machine deployment using Docker, Kubernetes, Terraform, Chef, and AWS services (EC2, S3, CloudWatch, VPC) resulting in a 60% efficient and streamlined virtual machine deployment.
- Built a multi-threaded C++-based RESTApi Load Testing tool, improving product performance by 10%.
- Developed a GUI-based testing tool with Python and OpenCV, reducing QA person-hours by 50%.

Summer Intern, Stylumia Intelligence Technology, Bangalore, IN 06/2018 - 08/2018
- Crafted a machine learning model for product classification to integrate it with a search bar, resulting in a 10% improvement in search efficiency.

PROJECTS

Guardian Angel | *Java, MongoDB, Kotlin, Rooms DB, Git* 08/2023 - 12/2023
- Designed a scalable Android app utilizing real-time data (vital signs, location, weather, and reproductive health) to deliver personalized well-being recommendations.
- Created a user-friendly interface using Material Design and Jetpack Compose, seamlessly integrating with a smartwatch via REST API.

Firearm Detection | *AWS, Mongo DB, Docker, Terraform, Helm, Kubernetes, Kafka* 05/2023 - 08/2023
- Integrated an on-the-fly object detection model implemented in C++ using ONNX runtime, reducing pipeline inference time by 80%.
- Implemented a Kafka pipeline using AWS EKS to handle continuous frame streams and efficiently route model inferences to an S3 bucket and MongoDB database for retrieval and analysis.

Generating Visualizations Using Large Language Models | *NLP, D3.js, JavaScript, HTML/CSS* 01/2023 - 05/2023
- Created an automated system utilizing GPT-3, D3.js, and Vega-Lite to generate high-quality visualizations based on user requirements.

Enhancing Disease Diagnosis using Transformers | *CNN, PyTorch, Pandas, NumPy* 01/2023 - 05/2023
- Refined image classification, segmentation, and localization models for polyps, abnormalities in chest X-rays, and pulmonary embolisms using ResNet and Swin Transformers.
- Considerably improved accuracy and reduced false positives by 5%.

TECHNICAL SKILLS

Languages: Python, C++, Java, Golang, Bash, Kotlin, HTML5/CSS3, D3.js, JavaScript, jQuery, SQL (Postgres)
Libraries: FastAPI, PyTorch, NumPy, Pandas, Matplotlib, Boto3
Frameworks: Bootstrap, Material-UI, Node.js, Leaflet, React.js, Next.js
Developer Tools/Platforms: Git, Docker, Kubernetes, Helm, Chef, AWS, Azure, OpenStack