

Sanyam Shilpkar

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EDUCATION

University of Massachusetts Amherst | GPA: 3.86 | 09/2018 - 05/2022

B.S. Informatics (Data Science) & B.S. Biology

- Member of the BioSci Club; Dean's List
- **Relevant Coursework:** Data Structures, Web Programming, Human-Computer Interaction, Intro to Data Science, Genomics & Data Science, Python for Genomic Data, Algorithms for DNA Sequencing, Practice and Application of Data Management, Mobile Health Sensing, Statistics Modeling/Health Data Science, Evolutionary Genomics and Bioinformatics

EXPERIENCE

CSX Transportation | Software Engineer | 01/2023 - Present

- Enhance backend functionality for enterprise-grade Java and .NET systems, reducing ticket resolution time by 25%
- Support frontend in Java apps using JSP, ensuring seamless frontend integration and UI performance.
- Resolve fast-paced database incidents and optimize SQL performance through query tuning and schema improvements.
- Collaborate with cross-functional teams to manage query depths and monitor server node endpoints for legacy app stability.
- Support Positive Train Control app consuming real-time rail sensor data via Apache Kafka, with performance monitoring through Datadog.
- Monitor application servers and manage deployments with IBM WebSphere, and automate builds with Apache Maven.
- Utilize SLF4J and Log4j to troubleshoot by analyzing integrated application logs.
- Automate build, test, and deployment pipelines with Jenkins and Kubernetes, ensuring continuous integration and deployment for Java.
- Manage version control with GitHub, using version snapshots and GitOps for safe deployments and infrastructure automation.

Tata Consultancy Services | Software Engineer | 09/2022 - 12/2022

- Engineered a full-stack banking portal using Node.js, Express, and Angular, integrating JWT-based authentication and RESTful API.
- Built middleware with Angular HttpClient to handle API requests and responses
- Completed intensive onboarding on Java, MongoDB, Angular, and Node.js

Hazen Lab | University of Massachusetts Amherst | Lab Assistant | 09/2020 - 05/2022

- Manipulated, merged, overlapped and performed data wrangling on big plant genomic data using dplyr, tidyverse and DT packages in R
- Built an interactive Shiny app dashboard using ggplot2 to visualize and analyze large-scale plant genomic datasets.
- Used Bioconductor to perform statistical and graphical analysis of high-throughput plant genomic data.
- Sequenced and Visualized genetics variation between different species of plants using DESeq and heatmaps.

SELECTED PROJECTS

Tickle List: Tasks that tickle your productivity bone [Live Demo](#) | 2025

- Developed a full-stack, serverless app with a React frontend and AWS backend, enabling users to add, update, and delete tasks in real-time.
- Engineered RESTful APIs using Python-based AWS Lambda functions, with API Gateway providing secure HTTPS endpoints.
- Designed and implemented role-based access to DynamoDB via IAM policies tailored to HTTP request methods.
- Integrated CloudWatch for real-time logging and performance monitoring, improving observability and debugging efficiency.
- Built a responsive, state-driven UI in React for seamless API interaction and live task list updates.
- Deployed frontend to AWS S3 & connected it with backend APIs to deliver a cloud-native, scalable task management solution.
- Validated API functionality and error handling using Postman to ensure robust and secure endpoints.

Weatherly: Weather based playlist generator | Fall 2020

- Designed and implemented a weather-driven music recommendation engine using Node.js and Spotify API for dynamic playlists
- Built a SQL-backed Node.js API for weather-based song recommendations, consumed by a dynamic HTML/CSS/Javascript frontend
- Integrated Weather and Spotify APIs to provide a user-friendly UI that dynamically updates Spotify's top 100 songs by weather

SKILLS

Languages: Java, Python, JavaScript, TypeScript, R, HTML/CSS

Frameworks/Libraries: Node.js, Angular, React, Express, .NET, JUnit, Shiny app

DevOps/Tools: Git, Jenkins, Datadog, Apache Kafka, Apache Maven, IBM WebSphere, GitOps, Kubernetes, Agile

Databases: MySQL, MongoDB, Oracle, PostgreSQL, DynamoDB

Cloud: AWS (EC2, S3, Lambda, DynamoDB, IAM, CloudWatch, API Gateway, SQS)

Testing/APIs: Postman, REST, JWT, A/B Testing, SLF4J, Log4j

Data Analysis/Visualization: ggplot2, dplyr, tidyverse, DT, DESeq, Bioconductor

