

# Jyothsna Kaamala

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## WORK EXPERIENCE

### Data Analyst

Newark, NJ, USA

*Residence Life Office, New Jersey Institute of Technology*

Sep 2022 - May 2024

- Utilized Python, SQL, and Tableau to optimize housing allocations and forecast future needs, enhancing resource utilization and student satisfaction.
- Automated reporting processes and conducted predictive modeling to inform strategic planning, resulting in improved operational efficiency and decision-making.
- Analyzed trends in student housing data using Power BI to support policy impact assessment and enhance communication with stakeholders through clear visualizations and reports.

### Software Quality Assurance Engineer

Chennai, India

*Uhnder Inc*

May 2020 - Jun 2022

- Collaborated with software experts to validate production software for Uhnder SOCs and Radar Systems, implementing system-level tests and ensuring functionality and performance of targeted use cases.
- Analyzed system requirements to generate test plans for various use cases, automating 70% of software development processes such as building, testing, and deploying using JENKINS/groovy scripts.
- Devised special-purpose hardware pipelines, enhancing system efficiency and throughput by 30%, and assuring high-quality software production for optimal operation of Uhnder SOCs and Radar Systems.

## SKILLS

**Programming Languages:** Python, R, SQL, Java

**Libraries & Tools:** Pandas, NumPy, scikit-learn, Matplotlib, PostgreSQL, MongoDB, Git, Tableau, Power BI, Jupyter

**Cloud:** AWS (EC2, VPC, RDS, S3, Lambda, Elastic Beanstalk)

## PROJECTS

### Predicting Water Potability Using Machine Learning

*Python, Pandas, NumPy, scikit-learn, Matplotlib*

- Conducted exploratory data analysis on 3,200+ water quality metrics using Pandas and Matplotlib, including data cleaning and feature engineering for a machine learning pipeline in Scikit-Learn.
- Trained and optimized classification models (SVM, KNN, Logistic Regression, AdaBoost, Bagging Classifier), improving the weighted F1 score from 82% to 93% through hyperparameter tuning and cross-validation.

### Cafe Delight Website using AWS Cloud Services

*S3, RDS, EC2, ElastiCache, API Gateway, Lambda, IAM, SES, Cognito*

- Developed a cafe website using a microservices architecture on AWS, ensuring scalability and maintainability.
- Utilized AWS Lambda, API Gateway for seamless communication between services, streamlining operations with RESTful APIs.

### Visualizing Institutional Rankings using Tableau

*Tableau Dashboards, Worksheets*

- Designed an interactive dashboard with three views to showcase university diversity, in-state student costs, and average SAT scores using scatter plots, bar charts, and interactive maps, including the Shannon Diversity Index.
- Implemented advanced features like filters, highlighting, and drill-down capabilities to enhance dynamic exploration and comparison of university rankings and metrics.

### Online Office Furniture Store

*Node.js, Express, PostgreSQL, SQL, EER Diagrams, React*

- Designed a PostgreSQL database on for 100k daily product searches and 10k orders, and built an inventory management API with Express, cutting backend latency by 35% through indexing and query optimization.
- Deployed the Node.js application on AWS Elastic Beanstalk for automatic scaling, load balancing, and monitoring.

## EDUCATION

### New Jersey Institute of Technology

*M.S Data Science — GPA: 3.65 / 4.0*

Newark, NJ, USA

Sep 2022 - May 2024