

Ketki Ambekar (she/her)

973.489.7081 | Jersey City, NJ | ambekar.ketki@gmail.com | linkedin.com/in/ketki-ambekar | github.com/ketkiambekar

RELEVANT WORK EXPERIENCE

Senior Software Engineer - Full Stack (C#, OracleDB, Python, Hadoop) Nov 2021 - Present
Barclays Investment Bank New York, NY

- Built and maintained the auto-quoting & pricing software using C# and Oracle relational database using event-driven programming, multi-threading, data structures & algorithms, **reducing the LOCs by 40%** by applying apt design patterns
- Integrated backend and frontend features into the pricing software, including real-time data updates (WPF, MVVM architecture) and end-of-day reporting of client trading, with a **success rate of 100%**
- Created simple data pipelines using Hadoop resulting in a **70% increase in data traffic** for visualizing data in Tableau
- Discovered data discrepancies and built & deployed Python automation tool to detect erroneous data **reducing risk by 50%** and enabling c-suite leaders to make error-free decisions
- Led the migration of Solace PubSub+ setup from physical to virtual machines, resulting in a **30% operation cost reduction**
- Evangelized Grafana Loki for log aggregation and observability **reducing the need for code change in 30+ modules**
- Created an asynchronous stream processing library for oracle DB **reducing RAM usage by 95%** to a constant 50 MB

Data Science Intern - Natural Language Processing (NLP) (Python, Flask, Scikit-learn, NLTK) Sep 2020 - Dec 2020
Nest Global Solutions Summit, NJ

- Implemented a feature for a mobile app for contextual pairing of users based on topics of conversation (sentiment analysis)
- Extracted and analyzed data from Reddit forums using natural language processing techniques like tokenization and parts of speech (POS) tagging, resulting in the curation of labeled data sets comprising over 700 text messages
- Performed Topic Modeling and finalized 5 broad classes (topics of conversation) using Latent Dirichlet Allocation (LDA)
- Performed multi-class classification using open-source ML models. **Achieved an accuracy of 62%** (beating baseline performance by 2%) using SVM

Independent Web Development Engineer (Php, MySQL, CSS3, HTML5, CMS) Apr 2016 – Sep 2019
Self-Employed Pune, India

- Built high-quality, responsive e-commerce and brochure websites with **99.9% up-time** using PHP and MySQL. Used HTML5, and CSS for front-end. Client Testimonials can be viewed at <https://ketkiambekar.com/testimonials/>
- Implemented Cloudflare Content Delivery Network for achieving reliable and faster website response times globally, resulting in a **50% decrease in page load times** for users in Australia
- Leveraged SolarWinds Pingdom tools to analyze website performance; identified and optimized key areas, achieving a significant **83% reduction in page load time**

SDE - Backend Engineer (C#, MS-SQL server, MS Azure, Redis Cache) Jul 2011 - Apr 2016
Sterling Infosystems Inc. Thane, India

- Revamped back-end application with **over 300+ modules** to source and verify court data, leveraging C#.NET libraries, Selenium, and MS SQL, **averaging around 13k LOCs annually**. Conducted peer code review
- Developed migration plan for switchover from legacy framework to cloud-based microservices architecture, deploying Service Bus Topic, Azure SQL, and Redis cache for rapid data delivery, **reducing system TAT by 80%**
- Automated the manual production check, **saving 66 man-hours per month** using SQL query reporting
- Won the "Sterling Star of the Month" award among 1100 employees for excellent communication & technical skills

TECHNICAL SKILLS

Programming Languages and OS: Python, C#, SQL, OracleDB, Postgres, MySQL, HBase NoSQL, Linux/Unix

Tools and Libraries: .NET, Scikit-learn, Pandas, Numpy, Matplotlib, Tensorflow, Keras, Scipy, REST API, Hadoop, Git, Tableau

EDUCATION

Master of Science: Data Science (Computational Track) Sep 2019 - May 2021
New Jersey Institute Of Technology Newark, NJ

Professional Certification in Machine Learning Jul 2020 - May 2021
Stanford Center for Professional Development (SCPD) Online

PROJECTS

Stress Detection from PPG data (Pytorch, Scikit-learn): Using data from PPG devices (for example Fitbit) in the WESAD data set to predict the presence of stress with binary classification using deep learning [View Project](#)

Big Data Flight Analysis (Java, Hadoop): Analyze flight data from a large dataset. Set up an instance of a Hadoop cluster, formulate a calculation strategy using MapReduce [View Project](#)