Abhishek Shah

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Objective

Passionate Software Engineer with a flair for creating robust, scalable web applications and insightful data analytics solutions. Thriving in fast-paced environments, I bring a blend of technical expertise and innovative problem-solving to deliver exceptional results. Eager to join a dynamic team where I can contribute to groundbreaking projects and continue my growth journey in the tech industry.

Technical and Software Skills

Programming Languages: Python, R, C/C++, C#, Java, PHP.
Data Analysis and Visualization: Pandas, NumPy, SciPy, Matplotlib, Tableau, ggplot.
Web Development: HTML, CSS, JavaScript, React.js, Node.js, jQuery, CodeIgniter.
Databases and Cloud Technologies: MySQL, SQL, MongoDB, AWS (EC2, S3, RDS, Lambda), Postgres, OpenCart.
Tools and Miscellaneous: Git, Linux, Unity 3D, Adobe Photoshop, Microsoft Office Suite, Jest (Unit Testing), CI/CD practices, BigCommerce API, SEO Optimization Tools, UI/UX Design, Waterfall, and Agile Methodologies, Keras, TensorFlow, MobileNet, OpenCV

Organizational Experience

Software Engineer / Web Developer – Trumbull Industries – Warren, OH **Present**

- Web Development Expertise: Proficient in HTML, CSS, JavaScript, and jQuery for front-end development; adept in PHP and CodeIgniter framework for backend processes.
- E-commerce Integration and Management: Skilled in integrating and managing e-commerce platforms using BigCommerce API and SQL for database management, including merchandising and promotional updates.
- SEO and Website Optimization: Experienced in using SEO plugins and PHP for search engine optimization and website performance enhancement.
- Data Analytics and Management: Proficient in MySQL and phpMyAdmin for data analytics, management, and troubleshooting; experienced in data migration and synchronization. Also, built dashboards on Tableau as an internal tool for salespersons.
- Project Management and Client Interaction: Effective in managing web development projects and client interactions, including requirement gathering, task delegation, and reporting.
- Cloud Services and Server Management: Skilled in AWS EC2, S3 buckets, RDS, and Lambda for server management, automation, and backups.
- App Development and Testing: Involved in the development and quality assurance of the BathGuru Configurator iOS App, including backend management using OpenCart.
- Technical Problem-Solving: Proficient in using Python for automation (e.g., AWS Lambda, web scraping) and internal tool development to streamline processes.
- UI/UX Design and Content Management: Experienced in UI/UX design implementation and content management within BigCommerce CMS and other platforms.
- Documentation and Process Improvement: Diligent in documenting tasks and processes for training and reference; constantly seeking ways to improve and streamline workflows.

Web Development Intern – Snapbrillia, Inc. – San Francisco, CA **April 2022 – September 2022**

- As a self-starter, effectively collaborated with a global team in an agile-based environment and actively participated in daily scrum meetings to report progress on assigned tasks.
- Showcased proficiency in collaborating with the design team to develop JavaScript, HTML, and CSS components for the b2c website and implemented them with logic utilizing the React JS framework, resulting in a seamless and efficient user experience.
- Effectively detected and resolved bugs across the b2b/b2c website, while managing wait time to ensure a smooth user experience.
- Followed a structured software development life cycle (SDLC) approach, incorporating continuous integration/continuous delivery (CI/CD) practices, leading to an efficient and effective software development process.
- Ensured code compliance with quality requirements by conducting comprehensive unit testing using Jest, achieving a 100% success rate, and resolving all reported bugs within an average of 24 hours to maintain an exceptional user experience.

Graduate Research Assistant – Youngstown State University – Youngstown, Ohio **January 2021 – December 2022**

- Developed innovative and ethical driving simulation software using eye-tracking technology to simulate complex scenarios, demonstrating expertise in software development and ethical research.
- Won first place in the University of Queensland's Three-Minute Research Thesis competition by presenting cutting-edge research on ethical dilemmas in driving simulations, showcasing strong communication and presentation skills.
- Utilized waterfall methodology to manage SDLC, gaining hands-on experience in ethical research and software development.

Education

Youngstown State University (YSU), Graduate School **Youngstown, OH**

- ***Master of Science*** in Computing and Information Systems, **GPA**: 4.00/4.00 December 2022
- ***Data Analytics Certification*** May 2022

Youngstown State University (YSU), College of STEM **Youngstown, OH**

- ***Bachelor of Science*** in Computer Science December 2020
- **Minor**: Mathematics **GPA**: 3.85/4.00

Research & Thesis

Youngstown State University – Youngstown, Ohio **January 2021 – December 2022**

Drivers' Visual Focus Areas on Complex Road Networks in Strategic Circumstances: An Experimental Analysis (ADAS)

- Developed scalable and customizable stochastic simulation software to create realistic driving experiences, while analyzing the visual focus of over 20 drivers.
- Utilized C# Job System and Burst Compiler to distribute processing across CPU cores in Artificial Intelligence (AI) Traffic Controller script, resulting in 30% faster simulation times.
- Utilized statistical analysis to gather synthetic data on human gaze patterns to simulate sight perception for neural network training, resulting in an accuracy of 90% on real-world data.

Youngstown State University – Youngstown, Ohio **August 2020 – December 2020**

Imputation of Missing Values in Time Series Dataset

- Performed data pre-processing and data engineering techniques, such as data cleaning, feature scaling, and normalization, to prepare the time series dataset for analysis.
- Applied 12 different machine learning (ML) algorithms using Python, showcasing proficiency in the field.
- Successfully imputed missing data in 7 scenarios, resulting in a reduction of up to 30% in the root mean squared error (RMSE), highlighting the ability to analyze and recover valuable information in raw datasets.
- Used data visualization tools, such as Matplotlib and ggplot, to explore and visualize the dataset, and gain insights into the patterns of missing data.

Training and Certifications

Data Analytics (YSU), Cybersecurity Certification (CISCO), Database Offerings, Hadoop Fundamentals, ElastiCache Service Primer, Quantum Ledger Database Service Primer, Neptune Service Primer, Redshift Service Primer (AWS), Building Data Lakes on AWS, Fundamentals of Agile Project Management & Predictive Project Management.

Publication

Shah, A. (2022). *Drivers' Visual Focus Areas on Complex Road Networks in Strategic Circumstances: An Experimental Analysis* [Master's thesis, Youngstown State University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=ysu1670861339531086

Projects

Face Mask Detection:

- Developed a face mask detection program using Keras, TensorFlow, MobileNet, and OpenCV that raises an alarm in real-time when a human face is detected without a mask.
- Employed MobileNet to implement a convolutional neural network for accurate and real-time detection of face masks and utilized image augmentation techniques to fine-tune the model's parameters for better performance.
- Demonstrated proficiency in image processing libraries, including OpenCV, to perform object detection & image classification.
- Optimized the program's performance by fine-tuning the neural network's hyperparameters and training it on a large dataset of images, resulting in an accuracy of over 95%.

Future Sales Prediction:

- Managed and led a team in the successful implementation of Gradient Boosting algorithm on time-series datasets to accurately predict future sales trends within a tight deadline, achieving top performance in a Kaggle competition.
- Utilized advanced machine learning techniques, including feature engineering and hyperparameter tuning, to optimize the model's performance and achieve top performance in a Kaggle competition.
- Demonstrated exceptional proficiency in time-series data analysis and prediction, leveraging expertise in statistics, machine learning, and programming to develop a high-accuracy model.

Collaborative Filtering for Movie Recommendations:

- Developed and implemented a movie recommendation system based on user rating history using collaborative filtering techniques.
- Utilized similarity metrics such as Tanimoto, Pearson, and Euclidean distance to measure the similarity between users' rating history.
- Created a function that calculates the top matches for a user based on their similarity scores to other users.
- Developed a function to recommend movies to a user based on their top matches and unwatched movies.
- Employed cross-validation techniques to evaluate the accuracy of recommendations.
- Improved system performance implemented caching techniques to avoid recalculating similarity scores for previously compared users.

Machine Learning Classification using Python:

- Achieved high accuracy scores of 97.78% and 95.91% respectively, using Decision Tree algorithm on Iris dataset and Breast Cancer Wisconsin dataset.
- Utilized train_test_split function to train and test the models, achieving recall scores of 97.78% and 95.56% for Iris dataset and Breast Cancer Wisconsin dataset respectively.
- Cross-validation was performed using the cross_val_score function, resulting in an average recall score of 95.56% and 93.60% with standard deviations of 0.05 and 0.04 for the Iris and Breast Cancer Wisconsin datasets respectively.
- Naive Bayes and Random Forest algorithms were applied to classify the Iris dataset, achieving high accuracy scores of 93.33% and 97.78% respectively.