BLESSY BOBY

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WORK EXPERIENCE

Erie 1 BOCES, Data Warehouse Technical, Buffalo, NY **— *Senior Computer Programmer*** Mar 2024 - Present

- Develop and maintain applications using **C#** and **.NET** framework for integration of diverse data sources like PowerSchool, into data warehouse and monitor batch jobs to ensure smooth transfer of data to **Oracle** and **MySQL** Server for decision-making.
- Created background jobs using **Hangfire** framework and developed a user interface to schedule jobs and update the cron expressions for multiple jobs within the job scheduler, improving operational efficiency and control by **80%**.
- Partnered with **cross-functional teams** to gather business requirements and translated them into effective .NET applications.
- Enhanced and maintained **Cognos** reports and dashboards to provide insights to NYSED and school districts, aiding them in making informed decisions and necessary improvements.
- Initiated Git branching method of version control which increased the team efficiency by **50%**.
- Collaborated with stakeholders to refine user stories and requirements, ensuring successful sprints and **15%** increment in development pace.

Roswell Park Comprehensive Cancer Center, Buffalo, NY — ***Research Affiliate (Data Analysis)*** Jun 2023 - Mar 2024

- Data analysis of differential gene expression from bulk and **single-cell RNA-seq** experiments using **R, Bioconductor and HPC,** integrating data with clinical outcome data to find novel druggable targets in pancreatic cancer, utilizing data from multiple published papers and NCBI.
- Identified outliers in data using visualization tools like **volcano plots** and **heat maps**, highlighting the need for further investigation and content review before accepting research findings for publication.
- Actively collaborated with senior lab researchers, accelerating efficiency of their research by providing analytics for multiple RNA profiling projects each consisting of 1000s of samples using **Seurat**, and gaining an understanding of scientific research methodologies.

Bosch Global Software Technologies PVT LTD, Coimbatore, India — ***Software Engineer*** Aug 2019 - Jul 2022

- Built a **custom C# library** for monitoring over **50 tools** used company-wide, enhancing their online and offline tracking capabilities.
- Developed enterprise-grade **software tools** using **modular/OOP/OOD methodology** in WPF with C# within the .Net framework, **enhancing the GUI,** to streamline the calibration analysis process for engineers, leading to a **50%** increase in efficiency.
- Upgraded a **Python/Tkinter GUI** Windows application, integrating ETAS MDA functionality, significantly boosting tool accessibility.
- **Full stack developer** spearheading **front-end** development efforts for **Bosch's Tool Catalog website** refactoring and maintenance, elevating user experience by implementing **API**s, impacting **80%** of the product portfolio.
- Independently managed multiple projects, effectively coordinating with clients and leveraging **Agile** and **Scrum** methodologies, while fostering collaboration with cross-functional teams and utilizing source control tools like **GitHub** and **Bitbucket**.
- Performed comprehensive code reviews and **led coding standards/ best practices sessions**, increasing team code quality by 20%.
- Expertise in the **full software product lifecycle**, from defining technical requirements, selecting optimal technologies, designing, and prototyping, to coding, levels of testing, and maintaining comprehensive documentation.
- Supported end users with **product demos**, and provided **encryption** and **compilation** for Java and C# tools ensuring code safety.

SKILLS

Programming Languages: C#, Python (NumPy, Matplotlib, Pandas), JavaScript, SQL, Java, Bash/Shell script, Groovy, R, Verilog, C

Web & Desktop Application Development: HTML, CSS, Bootstrap, React, Node.js, Swagger API, Syncfusion, WPF, WinForms, XAML, ASP.NET, MVC/MVVM, Web Forms, .NET Framework, jQuery, AJAX, NUnit, Oracle, PostgreSQL, Microsoft SQL Server, MongoDB, Testing

Software and Tools: IBM Cognos, Jenkins, Git, GitHub, TortoiseSVN, Swagger, Postman, Microsoft Visual Studio, PyCharm, Jupyter Notebook, RStudio, Atlassian (Bitbucket, Sourcetree, Jira, Trello, Confluence), PowerShell, Linux, Power BI, PC Guard, Inno Setup, LaTex

EDUCATION

Master of Science in Computer Science and Engineering (Software Systems) Jan 2024
University at Buffalo, The State University of New York, USA *CGPA: 3.3*

Bachelor of Technology in Computer Science and Engineering Jul 2019
College of Engineering Trivandrum (CET), India *CGPA:3.47*

PROJECTS

Online Dictionary (React, Material UI, Node.js, RESTful APIs, MongoDB, Kubernetes)

- Designed and implemented a web application, Online Dictionary to offer an ad-free experience with access to over 120,000 words.
- Created wireframes and refactored the front-end code to improve readability and modularized components for each functionality resulting in a **20%** improvement in page load speeds by utilizing modern web technologies such as **React.js** and **MUI**.
- Facilitated integration of third-party services and **RESTful APIs** to add new functionalities and conducted testing and debugging using **ChromeDevTools**.

Bank of Buffalo (pgAdmin, ElephantSQL, HTML5, Bootstrap, Express, jQuery)

- Designed and developed an **ER-model** and translated to **relational schema** for a complex database system to support a banking system with user-friendly web application enhancing customer and staff interaction.
- Implemented **BCNF** normalization reducing data redundancy and anomalies by **34%**.
- Optimized database performance using indexing and query execution analysis resulting in a **60%** improvement in query response times.

High Performance Optimizations and Dynamic Load Balancing for Computational Aerodynamic Solvers (VSSC, ISRO)

- Built an efficient distributed MPI (Message Passing Interface) framework for solving computational problems, ensuring load balancing in a parallel high performance computing environment with over 100 cores.
- Worked on data consisting of **mesh files** in **VTK format**, which was converted into graphs and partitioned using METIS software.
- Derived that greedy approach is more efficient compared to other communication approaches by **56%**.

CERTIFICATIONS

- **RBEI-NIPUN: Data Certified, *Simplilearn:*** *Statistics, Data visualizations, Predictive analytics, Hadoop Big Data framework, PySpark, and Amazon Web Services (AWS)*