VAMSI KRISHNA BELLAM

81 Merrimac St, Buffalo, New York 14214
+1 (716) 939-6096 | vbellam@buffalo.edu | linkedin.com/vamsibellam | github.com/vamsikri-hash

WORK EXPERIENCE

Hottinger Brüel & Kjær **July 2021 – July 2023**
Software Engineer *Remote, India*

- Designed and Implemented 12-factor Microservices for live test data streaming in C# (Websockets & RPC) and data search service in Python (FastAPI & MongoDB) along with analytics frontend applications(modern micro-frontends architecture) for respective services in HBK data platform.
- Migrated a huge Java-based monolith and a few Microservices from the Oracle database to Postgres to remove licensing dependency and reduce operational costs by more than 50%.
- Enhanced scalability of Microservices in an analytics system by splitting a single script container deployment to Kubernetes deployments with independent docker containers.
- Engineered cloud agnostic delivery mechanism for the Scalable Analytics and Test Data Management software artifacts in an Air-Gap environment using Shell scripting, Docker, Helm Charts, and K3s.
- Managed Continuous Integration and Continuous Deployment of 10 NPM and Maven libraries, 5 React micro frontends, and more than 12+ polyglot Microservices with GitOps, Docker, Kubernetes, and Azure services.

PUPILFIRST **September 2022 – January 2023**
Assistant Coach *Remote, India*

- Improved full-stack development courses offered to more than 1000 students from various universities and colleges across India with detailed feedback on course content, programming assignments, and automated tests.
- Guided students in building and deploying quality web applications using JavaScript, NodeJS, Express, TDD, PostgreSQL, and Render on course discord community.

Assistant Coach **April 2021 – December 2021**

- Mentored teaching assistants in advanced web development courses offered to faculties from 50 institutions across India.
- Supported students on Pupilfirst LMS and course discord community by answering doubts on JavaScript, Ruby, Rails, PostgreSQL, and Deployment.

VIMANA **January 2021 – June 2021**
Software Engineering Intern *Chennai, India*

- Developed end-to-end modern front-end systems for the Smart Manufacturing Analytics in React, Flow, Typescript, Docker, Kubernetes, Kibana and Grafana by following clean code practices and Safe Agile principles.
- Increased code safety and developer productivity by migrating JavaScript libraries to Typescript.
- Reduced frontend build times by more than 50% by splitting Monorepo into independent libraries.
- Fixed various bugs and enhanced internationalization across frontend libraries and analytics applications to improve user experience.

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, TypeScript, OCaml, Python, ReScript, Java, Ruby, SQL, HTML, CSS,
- **Frameworks:** React, Next.js, Ruby on Rails, Node.js, Express, FastAPI
- **Databases:** PostgreSQL, MongoDB
- **Developer Tools:** Git, VSCode/IntelliJ, Docker, Kubernetes, Github Actions, Helm

EDUCATION

University at Buffalo, The State University of New York **August 2023 – May 2025**
Master of Science in Computer Science and Engineering - GPA: 3.75/4.0 *Buffalo, New York*

SASTRA University **July 2017 – June 2021**
Bachelor of Technology in Computer Science and Engineering - GPA: 8.1/10.0 *Thanjavur, India*

PROJECTS

Ruse Interpreter

- Implemented core type checker and evaluator for the RUSE programming language (SCHEME like language with a static type system) in OCaml via Type-Driven Development with unit tests(OUnit).

Text Search Engine

- Designed a modular search engine(crawler, indexer, and querier) for local text based documents using Modules, Functors, 2-3 Trees and other functional programming techniques in OCaml.
- Verified correctness and incorrectness of engine and data structures specification with Black-box, Glass-box and Property based testing.