

# VAIBHAV KUMAR

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## Objective

Seeking full-time opportunities in Software Engineering, starting in January 2020.

## Education

**Master of Science**, Computer Science, Syracuse University,  
Syracuse, USA, December 2019.

**Bachelor of Engineering**, Information Science and Engineering,  
Visvesvaraya Technological University, India, June 2012

## Academic Projects

**Micro Services** | Course: Distributed Objects | Skills: .Net Core, C#, ASP.NET Core MVC, Entity Framework Core, Docker, JavaScript, RabbitMQ, JSON Web Tokens, RESTful API

- Developed a distributed system of containerized and independently deployable microservices, working together to provide services for a team collaboration tool.

**Remote Package Analyzer** | Course: Software Modelling and Analysis | Skills: C#, WPF, WCF, .Net Framework

- Developed a scalable type-based dependency analysis tool that evaluates code files and packages for dependencies.
- The front end, developed in WPF, communicates with the server through an asynchronous message passing communication channel implemented using a blocking queue.
- Implemented Tarjan's algorithm to identify strongly connected components in a directed graph of dependencies.

**Source Code Repository** | Course: Object-Oriented Design | Skills: C#, C++ (managed and unmanaged), WCF, WPF, XML, .Net Framework

- Developed Key-Value pair-based NoSQL database which provides capabilities such as check-in, check-out, browsing of source code files, version management, file persistence, acquisition and publication of source and document files

**Nucleus Message Passing** | Course: Principles of Operating System | Skills: LINUX, C, C++.

- Designed system nucleus to implement an interrupt response program using asynchronous message passing and system calls
- When extended with an existing operating system, system nucleus supports synchronization, coordination and multiprogramming

## Relevant Experience

**Full Stack Developer, Syracuse University**

(May 2019-Current)

**Skills:** PHP, MySQL, ASP.Net Core, Entity Framework Core, C#, HTML5, CSS3, Bootstrap, IIS, Git, Model-View-Controller, JavaScript

- Developed a centralized system for collaboration among colleges at Syracuse University, saving over 200-man hours every week.
- Solved the challenge of migrating unstructured and out of sync spreadsheet data from different sources to a centralized RDBMS.

**Graduate Teaching Assistant, Internet Programming (graduate level), Syracuse University**

(Jan 2019-May 2019)

**Skills:** REST, ASP.Net Core, Entity Framework Core, C#, HTML5, CSS3, Bootstrap, IIS, Model-View-Controller, ECMAScript 6, React

- Worked as a Graduate Teaching Assistant for Dr. Jim Fawcett for *Internet Programming (CSE-686)*, a graduate-level course.
- Prepared course materials, gave lectures, organized and evaluated weekly labs and projects, held office hours for one-to-one help.

**Software Developer, Tata Consultancy Services, New Delhi, India**

(Oct 2012-Feb 2016)

**Skills:** C#, C++, Microsoft SQL Server, ASP.Net, ADO.Net, Entity Framework, HTML5, CSS3, Bootstrap, TFS, VSTS, Model-View-Controller, JavaScript, JSON, jQuery, XML, XSLT

**Business Domains:** Banking and financial services, logistics, petrochemical

- Led development of HSB-Bupa insurance portal for Hang Seng Bank, Hong Kong, ensuring timely and quality delivery of modules
- Developed HR management system and a web-based collaboration tool to bring together SABIC, Saudi Arabia and its associates
- Worked as a developer and module lead of two major modules of a very large-scale supply chain management system which optimized provisioning to procurement process time and efforts by 300 percent.
- Worked with the research and development team to develop reusable components that made the application more secure, efficient and economical by avoiding the purchase of any Commercial off-the Shelf (COTS) or any third-party products.
- Led development of the recruitment module and integration with other modules to deliver an e-recruitment system during the training program.

## Skills and Interests

**Programming:** C#, C++ (managed and unmanaged), C

**Web:** HTML 5, ASP.NET Core MVC, JavaScript, jQuery, React.js, CSS3, Bootstrap, XML, PHP

**Database:** Microsoft SQL Server, NoSQL, MySQL, T-SQL

**Misc.:** Microsoft Azure, Entity Framework Core, Microservices, WCF, WPF, Unix Shell Scripting, Docker Containers, Object Oriented Design, Design Patterns, Distributed Systems, Analysis and Design of Algorithms

**Tools:** Visual Studio, SQL Server Management Studio, Git, TFS, VSTS, PowerShell, PyCharm, Jupyter Notebook, MySQL Workbench, Azure DevOps, Adobe XD, IIS, Microsoft Office.

## Awards, Recognitions, and Involvement

- Awarded with a 30% scholarship for the MS Computer Science program at Syracuse University, New York (2018-2019).
- Awarded with ILP Kudos, several "on the spot" awards as developer and module lead and best team while working for TCS.
- Obtained various awards while playing competitive cricket at different levels such as school, university, and senior division leagues.
- Led school and college teams for cricket and soccer.