

# KM Ferdous

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## SUMMARY

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Software Engineer with 10+ years of experience in System design and software development. Proven expertise in finance, telecom, and government systems, with measurable impact such as **5x** faster trading systems and **1M+** employees served via EFT. Skilled in **C#, .NET, python, Java, microservices, databases, cache, and AWS**. Currently pursuing an M.S. in Computer Science at Kennesaw State University.

## EDUCATION

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**Kennesaw State University** Georgia, USA  
*Master of Science in Computer Science* Jan 2025 – Present

**Bangladesh University of Engineering and Technology** Dhaka, Bangladesh  
*Bachelor of Science in Computer Science and Engineering* Jan 2008 – Feb 2013

## EXPERIENCE

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**Graduate Research Assistant** Jan 2025 – Present  
*Kennesaw State University* Georgia, USA

- Research in the field of Software Engineering.  
Research area: Software reliability, package re-usability, Software supply chain, dependency management

**Lead Software Engineer** Apr 2023 – Jul 2024  
*EcoSoftBD IT Ltd* Dhaka, Bangladesh

- Led the development team; managed backlog refinement and sprint planning.
- Designed and implemented **Onion architecture** for scalable and maintainable backend systems
- Incorporated software testing like **unit tests, integration tests**, and other relevant practices
- Boosted **real-time share trading performance by 5x** by restructuring microservices and optimizing data models.
- Improved **data transfer efficiency by 10x** using algorithmic compression and backpressure handling.
- Played role as Quant Developer for **Quantitative Finance** of Dhaka Stock Exchange Trading.
- Developed trading platform modules using **FIX, ITCH, and FAST protocols** to communicate with **Stock Exchange**.
- **Tech Stack:** C#, ASP.NET Core, MongoDB, PostgreSQL, Entity Framework Core, Redis, React, SignalR, REST API, AWS, Cypress, NUnit, Git, Bitbucket, Azure.

**IT Consultant** Jan 2019 – Mar 2023  
*Ministry of Finance* Dhaka, Bangladesh

- Conducted detailed requirement analysis, designed system modules, and performed data modeling.
- Automated payroll, bonus processing, and service history management for **over 1 million** employees.
- Achieved the milestone of enabling **1M+ government employees to receive EFT payments**.
- Built a House Loan Subsidy module automating EMI calculations, and successfully facilitated subsidies for **more than 2 thousand** employees.
- **Tech Stack:** C#, ASP.NET MVC, Oracle, PLSQL, Redis, NUnit, TFS, Git.

## Software Engineer

*Reve Systems Ltd*

Feb 2013 – Dec 2018

*Dhaka, Bangladesh*

- Built a desktop app for **learning 10 languages** with RESTful backend integration.
- Implemented **peer-to-peer/group audio calls with recording**; improved audio quality by **7x**.
- Mentored junior developers and served as a Scrum Master
- Researched RFC for RTP, SIP and implemented **video call feature** using FFMPEG
- **Tech Stack:** C#, C++, WPF MVVM, .NET Framework, Java, Springboot, MySQL.

## TOP PROJECTS

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**Online Share Trading Platform** | *C#, ASP.NET Core, React, MongoDB, Redis*      Apr 2023 – Present

- Designed end-to-end solution with BO account opening, order management, and market analysis.

**IBAS++ (Budgeting & Accounting System)** | *C#, ASP.NET MVC, Oracle*      Jan 2019 – Mar 2023

- Web-based Financial solution managing budgets and payments for the Government of Bangladesh.

**Vasha Guru (Language Learning Platform)** | *C#, Java, C++, WPF, MySQL*      Jun 2016 – Jun 2018

- A desktop-based interactive virtual classroom software, milestone project of ICT Division, Bangladesh

**iTelPCDialer** | *C#, C++, .NET, SQLite, TFS, SIP, RTP*      Feb 2013 – Jun 2016

- The desktop version of iTelMobileDialer, a flagship messaging and calling app of the company.

## TECHNICAL SKILLS

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**Languages:** C#, python, Java, C/C++, SQL, PLSQL, JavaScript

**Frameworks:** .NET, ASP.NET MVC, ASP.NET Core, EF Core, Spring boot, WPF, MVVM

**Database:** Oracle, MySQL, PostgreSQL, Redis, MongoDB, SQLite

**Version Control:** Git, TFS

**DevOps:** Bitbucket, Jenkins, Azure, AWS

**Developer Tools:** Docker, Visual Studio, IntelliJ, VS Code, Burp Suite, Postman

**Testing Framework:** NUnit

**Quantitative Finance:** QuantLib

**Protocols:** FIX, ITCH, FAST, SIP, RTP, UDP, TCP, HTTP, REST