

Karan Chitkara

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Summary

Experienced Software Engineer with a demonstrated history of working in highly regulated industry. Skilled in Android, iOS and web app development with focus on building common architecture for android and iOS apps.

Technical Skills

Programming Languages	C, C++, C#, Swift, Java, MySql, SqlServer, XML, JSP, Javascript, Kotlin, HTML
Frameworks	Bootstrap, KMM, Struts, JFramework
Design Patterns	FLUX, MVC, MVP, MVVM
Other software	Xcode, Android Studio, IntelliJ, Eclipse, Net Beans, Git, Jenkins, Visual Studio

Job Experience

Senior Principal Software Engineer, Medtronic plc,

June 2025 – Present

- Architecting scalable, cross-functional software solutions with human factors, firmware, and clinical teams.
- Driving cybersecurity-first development with secure provisioning, obfuscation, and telemetry safeguards.
- Delivered multiple international patents on electrode ranking, visualization, and automation.
- Influencing enterprise-level development standards and mentoring software talent across teams.

Principal Software Engineer, Medtronic plc,

December 2021 – June 2025

- Design common architecture for mobile apps (iOS & Android) used by across all the teams within organization.
- Key member in project timeline & cost estimation.
- Responsible for researching new technology and bringing in new tools for development.

Senior Software Engineer, Medtronic plc,

July 2018 – December 2021

- Designed and implement software application and components to support deep brain stimulation therapy.
- Designed software architecture for creating common library that is shared among various apps.
- Dev-lead for multiple projects, lead the development team for creating high quality software.
- Used Cryptography to communicate with secure proprietary BLE devices.
- Mentored Summer Intern.

Software Engineer, Medtronic plc,

Jan 2017 – June 2018

- Build android app for DBS therapy (Deep Brain Stimulation).
- Use design patterns such as MVC, MVP and FLUX in building quality software.

- Automated the process of capturing screens of software application to reduce manual labor, optimize time and reduce cost.
- Create unit tests and automated tests to maintain system quality.

Associate Software Engineer, Medtronic plc,

April 2015 – December 2016

- Fix application defects and write automated and unit tests to maintain system quality.
- Coordinate software development activities with other engineers, and managers.
- Create features in android application and support senior and principal engineers in feature development.

Software Developer, Open Access Technology Inc.,

January 2014 – March 2015

- Fixed over 150 real world problems in the software used by power industry.
- Used web Plus, java script, and C# to create new modules.
- Used SQL server to write store procedures to interact with the system, along with views, functions, tables etc.
- Worked on Power Trading and Generation Planner software used by almost every provider of energy.
- Worked on an engine that uses complex C++ data structures and interacts with SQL Server to solve unit commitment problem.

Java Programmer, Distance and Continuing Education, NDSU

April 2012 – December 2013

- Designed a web-based system to reduce paperwork and increase productivity for proposing courses.
- Programming language: Java, Database: MySQL 5.1, Front-end: HTML 5.0, CSS 2.0
- Write queries to fetch and store course information from the database in the specified format.
- Validate form data using Struts 1.3 framework and Java.

Patents & Awards

- 3 Approved Software Patents.
- 2 Pending Software Patents.
- 1 Award for successful delivery of time critical project at Medtronic.
- 1 Technical Contributor of the year Award at Medtronic
- 1 Director's Award in college
- 1 Award for excellence in mathematics in high school.

Education

Bachelors	Masters
North Dakota State University , Fargo, ND <i>Masters of Science, Software Engineering</i> , December, 2014	North Dakota State University , Fargo, ND <i>Bachelor of Science, Computer Science</i> , May, 2012

Masters Research Project

- Created an interactive visualization system for multi-level view of opinion mining results.
 - [Research Paper](#)
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