

Chris Harman

Senior Software Engineer

Experienced software engineer focused on writing human-friendly code, mentoring colleagues, and driving operational efficiency.

WORK EXPERIENCE

ZAIS Group

Jul 2022 – Present

Senior Software Engineer

CLO Model – AWS – Software Consultant

- Ported financial model to the cloud and added horizontal scaling, leading to a 250x speed increase

CLO Data Pipeline – Airflow – Data Analytics Team

- Spearheaded creation of robust and configurable data pipeline, providing insights into \$4.6B in loan assets

Natural Language Interfaces – OpenAI – Data Analytics Team

- Built natural language interfaces to Azure, Excel using OpenAI's API

Embedded Search – Python – Data Analytics Team

- Created components of document embedding system potentially improving analyst workflow efficiency 10x

Medtronic

Jan 2015 – Jun 2022

Senior Software Engineer

Activa – Android – Deep Brain Stimulation Team

- Implemented therapy control software for deep brain stimulation implants, leading to the sunsetting of an expensive proprietary hardware platform
- Re-architected application telemetry layers to improve system error handling and increase development speed
- Wrote a standalone dependency injection system to eliminate third-party compliance concerns

Percept – Android – Deep Brain Stimulation Team

- Designed key concepts of the overall application architecture, event system, and telemetry modules
- Developed the software system for controlling deep brain stimulation therapy on a new hardware platform, contributing to multiple double-digit quarterly increases in business revenue
- Led onshore/offshore developers by teaching system behavior, conducting code reviews, and clarifying requirements
- Collaborated with end users (neurologists/nurses) on UI design and workflows

Symptom Tracker – Android/Spring – Digital Health Team

- Constructed core symptom-tracking and multidirectional mobile data-syncing functionality
- Demonstrated viability of a new language (Kotlin) for the department
- Created REST endpoints for mobile data sync, trialing protocol setup
- Coordinated the efforts of onshore developers with offshore test teams

Prototype – Android – Deep Brain Stimulation Team

- Owned the deep brain stimulation clinician application portion of a multi-system prototype project, proved out viability representing \$50M+ in savings

Contact

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Impact Highlights

- Led software development of complex features for Class III medical devices
- Drove department adoption of new technologies to mitigate 90%+ of common error sources (Kotlin, SonarQube)
- Authored department-wide coding standards to improve patient safety and enhance code clarity
- Coordinated improvements in best practices for code reviews, static analysis, CI
- Collaborated with diverse stakeholder groups to increase safety, usability, and security
- Taught Kotlin to peers by leading group sessions

Technologies

Kotlin, Python, Java, Android, SQL, AWS, Azure, Spring, Pandas, Airflow, Docker, JUnit, Jetpack, OpenAI API

Education

University of Minnesota B.S. in Computer Science

Software and Data Systems
Development

Aug 2012 – Dec 2014

Bethany Lutheran College B.A. in Physical Sciences

Aug 2009 – Dec 2014

Personal Android Projects

- Tesla Buddy (Tesla analytics)
- WAPI (hyperlocal weather)
- League (real-time NFL data)