Part 2 Two Decades at Bosch

Vehicle Diagnostics and Personal Growth

Part 2 of 7: Santa Barbara - Data

Fundamentals & Finding My Voice

§ 1/11: Recap Early Innovations

From Data Optimization to Internal Search Part 1

⚙ My Bosch journey began with solving immediate pain points.

⚙ Next, an assignment in Automotive Aftermarket (AA) in Santa Barbara, California.

Crucial Vehicle Diagnostics System Struggling

⚙ Built with MS Access Database and MS Forms for code generation.

⚙ Core Issue: Data had grown significantly, but **crucial DB columns lacked indexes**.

⚙ A classic case of a system outgrowing its initial design.

Indexes Bringing an Application Back to Life

⚙ By introducing a few **key indexes**, the application sprang back to life by the second day!

⚙ Immense relief and satisfaction.

Demonstrates the power of basics.

Refining Code Restructuring Tables Creating Views

⚙ Over the next couple of years, my work focused on further system optimization.

⚙ Refining code, restructuring tables, creating views with **optimized joins**.

⚙ Basic DBA/dev tasks, but with profound impact.

Pushing Comfort Zones

From Shy Introvert to Tech Speaker

⚙ Inherently shy, introverted, nervous.

Introducing myself was a challenge!

⚙ Knew I had to push past this.

Threw myself into **giving tech talks**.

⚙ Initially terrified, gradually found confidence and a voice.

Try Stumble Learn Adapt

⚙ This journey of overcoming public speaking fear was a personal Agile iteration.

⚙ Applying the principles of trying, learning from stumbles, and adapting.

Making Life Easier Through Simple Tools

⚙ Found joy in building tools: Excel-like editable grid (ASP.NET), PDF generator.

⚙ Simple solutions that provided immediate help.

Developing One of Boschs First Neural Networks for In Vehicle Use

⚙ An exciting project: developing an Artificial Neural Network for an ECU.

⚙ Enabling **AI-driven decisions** within the vehicle.

⚙ Early steps into a field now reshaping our world.

Initial Performance Woes and The Usual Suspects

⚙ Migrating Access data to Oracle.

Initial migration had **severe performance issues**.

⚙ Culprits: Repetitive ID calls, separate detail queries, nested loops.

Indexes Efficient Joins Algorithmic Thinking

⚙ Introducing appropriate indexes.

⚙ Crucially, replacing nested loops/queries with **efficient joins**.

⚙ Transformed application performance.

Big O, indexes, join strategies were practical!

Strong Data Skills Supporting Vehicle Diagnostics

⚙ My months in Santa Barbara: fixing, extending, enabling brilliant diagnostics experts.

⚙ A win-win.

Next Up (Part 3): Plochingen & the NextGen Platform.

⚙ Stay tuned!

Vehicle Diagnostics & Personal Growth

Part 1: Early Days & First Innovations
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Part 2: Vehicle Diagnostics & Personal Growth (Santa Barbara) (Current)
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Part 3: Oracle Migration & NextGen Platform (Plochingen)
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Strong data skills empower domain expertise.

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