GALVANIZE

Case Study:

Upskilling non-technical employees into full stack engineers

How a large automobile company solved hiring challenges by upskilling existing talent

INTRO

One of the largest car makers in the world was grappling with hiring and upskilling existing employees as they modernized and digitized their business.

CHALLENGE

A Global 50 Automobile Manufacturer faced a number of challenges common to large organizations, stemming from legacy infrastructure, policies, and organizational layout. All these issues caused serious hiring and training challenges. Employees did not have practical experience working in a cloud native, production environment. Although employees received prior training in some Java, JavaScript, and basic computer science, the Company needed a bolt-on solution that could provide a synthesized view of engineering and tie key concepts together.

SOLUTION

The Company turned to Galvanize, who worked to assist in transforming selected participants into cloud native developers. The objective was to give the participants a complete toolset to enter their technical teams. This included leveling up their technical knowledge as well as enabling them with a practical understanding of the values, principles, and practices of Extreme Programming (XP). Finally, the participants demonstrated business value by delivering software products of their design, deployed to the cloud, at the end of the training. Galvanize worked with the Company to tailor the curriculum to align with participants' incoming personas ensuring that it would align specifically with the skills they needed to meet the program's goals.

Galvanize delivered a customized, 12-week project-based Cloud Native Developer program to promote measurable understanding and practical application of the topics. Each lesson was reinforced with an exercise using real Agile/XP. The capstone projects were a culmination of all the lessons learned. Early in the training, students identified a project they wanted to create to test their new skills in a sandbox development environment reproduced to the company's tech specifications. The instructors then took on the role of consultants, working in an agile environment to coach the students to produce polished software products.

OUTCOME/RESULTS

During the engagement, Galvanize used a formative assessment process to track student progress through specific learning objectives and assessments, which served as both a tool for instructors to customize the experience and summarized the objectives for students. Individuals with diverse and minimal technical expertise were reskilled into end-to-end full stack software engineers, with a 43% lift in technical skills such as React, Spring Boot, JavaScript, XP, and Agile methodologies.

Projects the students created demonstrated key skills such as teamwork, communication, pair programming along with other agile methodologies. After training, the participants were placed into different teams at the company and immediately added value.

The topics that were covered included:

- Agile/XP values, practices, and principles
- TDD
- Pair programming
- Growth mindset
- Incremental design
- Concepts of full stack engineering
- Java and Spring Boot
- JavaScript and React
- Cloud Native App Architecture
- DevOps practices
- CI/CD pipeline practices
- Deployment to public cloud