



11 Courses

Introduction to Software Engineering

Getting Started with Git and GitHub

Hands-on Introduction to Linux Commands and Shell Scripting

Python for Data Science, AI & Development

Developing AI Applications with Python and Flask

Django Application Development with SQL and Databases

Introduction to Containers w/ Docker, Kubernetes & OpenShift

Application Development using Microservices and Serverless

Application Security for Developers and DevOps Professionals

Monitoring and Observability for Development and DevOps

Back-end Application Development Capstone Project



Jan 20, 2025

**Matthew Ellingsen**

has successfully completed the online, non-credit Professional Certificate

# IBM Back-End Development

In this Professional Certificate learners developed the key skills and know how required for Back-End Development. They used latest tools and technologies used by professional back-end developers, including Linux scripting, Git and GitHub, Python, SQL, Django, Containers, Docker, Kubernetes, and OpenShift, Microservices, Serverless, as well as practiced Application Security, and Monitoring. The holders of this certificate completed numerous hands-on labs and projects to gain practical experience. They should now be able to take on the challenges for an entry level role in Back-End Development to build server-side systems and services that power modern web and mobile applications.

Rav Ahuja, Global  
Program Director, IBM  
Skills Network

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:

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