# Enkhdavaa Batlkhagva

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I have five years of experience in software development. In this period, I gained in-depth knowledge in scrum/agile, software design, digital twin, and model based testing. Moreover, I consistently improves my technical skills in the area of web and game development, and machine learning.

## Experience

### Software Designer
*ICT Netherlands B.V.*

📅 Jan 2021 — Present  ⦿ Eindhoven, NL

- Created an infrastructure strategy for using Model-Based-Testing at Thermo Fisher Scientific.
- Created state transition models for testing various subsystems of the TEM microscope at Thermo Fisher Scientific.
- Designed and developed 3D virtual hardware simulator for testing the control software of a factory at ICT Group.

**.NET C#, Unity 3D, C++**

### Software Designer Trainee
*Thermo Fisher Scientific*

📅 Jan 2020 — Oct 2020  ⦿ Eindhoven, NL

- Designed and developed a proof of concept for 3D virtual hardware simulator tool. The tool is for testing software using Unity3D game engine.

**.NET C#, Unity 3D, Matlab**

### Embedded Software Engineer
*Tavan Bogd Management*

📅 Mar 2018 — Sep 2018  ⦿ Ulaanbaatar, MNG

- Contributed to implementing contactlesss payment using wireless technologies (Bluetooth and WIFI).
- Created a windows desktop application for exchanged data with Oracle DB.

**.NET C#, C**

### Embedded Software Intern
*Innovation for High Performance Microelectronics LLC*

📅 Jan 2017 — Mar 2017  ⦿ Frankfurt (Oder), DE

- Implemented firmware drivers for a platform that measures a power consumption with high precision.

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### Embedded Software Engineer
*Ametros Solutions LLC*

📅 Jul 2015 — Sep 2016  ⦿ Ulaanbaatar, MNG

- Developed firmware drivers for home automation devices (light-switch, intrusion and air quality sensors).
- Contributed developing wireless data transmission between devices.

**.NET C#, C**

## Projects

### Model Based Testing (MBT)
*Thermo Fisher Scientific*

📅 Oct 2021 — Present  ⦿ Eindhoven, NL

- Developed state transition models for random test generation
- Created a testing workflow for development process
- Developed adapters for CI by connecting SUT with MBT tool
- Created documentations and presentations for users

**Axini, .NET C#, C++, GIT, Jenkins, Shell scripting**

### Center Of Excellence (COE)
*ICT Netherlands B.V.*

📅 Jan 2021 — Oct 2022  ⦿ Eindhoven, NL

- Designed and developed a virtual 3D factory simulator to replace hardware testing dependency
- Developed HAL interface for the simulator (DT) for higher abstraction layer software
- Created CI & CD for the simulator (DT)

**Unity3D, OPC-UA, .NET C#, GIT, Docker, Bamboo CI**

### Virtual Hardware Simulator for Transmission Electron Microscope (EngD)
*Thermo Fisher Scientific*

📅 Jan 2020 — Oct 2020  ⦿ Eindhoven, NL

- Deisgned and implemented a 3D virtual hardware simulator for firmware and software testing so that testing is not dependent on real hardware.

**Unity3D, .NET C#, GIT, Matlab, Docker**

### Dependency Management and Scope Control for HMI products (EngD)
*Thermo Fisher Scientific*

📅 Sep 2019 — Dec 2019  ⦿ Eindhoven, NL

**Goal:** Codeveloped a domain-specific language and a live-code dependency checker to detect software architechture violation.
**Role:** Software engineer co-developing a live dependency checker

**Roslyn, .NET C#**

## Education

**Engineering Doctorate (EngD) in Software Technology**

*Eindhoven University of Technology*

📅 Oct 2018 — Oct 2020  📍 Eindhoven, NL

**BSc Electronics Engineering Technology**

*Mongolian University Of Science and Technology*

📅 Aug 2011 — Jul 2015  📍 Ulaanbaatar, MNG

## Skills

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|---|---|
| C# | ●●●●● |
| Agile Scrum | ●●●●● |
| Git | ●●●●○ |
| C++ | ●●●○○ |
| JavaScript and TypeScript | ●●○○○ |
| Python | ●●●○○ |

## Hobby

- Bouldering, Improvization, Running
- Playing guitar, sketching
- Game development

## Projects

**Designing Smart Landing System for Agricultural Drones (EngD)**

*AgroTech*

📅 May 2019 — Jul 2019  📍 Eindhoven, NL

**Goal:** Design and implement the drone control software to save time of field analytics

**Role:** CI engineer and software engineer, responsible for proposing design choices and co-developing the drone control

**Python, DroneKit**

**Face AI for Condition Monitoring (EngD)**

*Philips Healthcare*

📅 Jan 2019 — Apr 2019  📍 Eindhoven, NL

**Goal:** Add new features to the existing remote consultation system using AI services (Microsoft face AI, Amazon Rekognition)

**Role:** Software developer/Configuration manager responsible for co-developing back-end services using C# and implementing a CI pipeline

**Microsoft Face AI, Amazon rekognition, .NET C#**