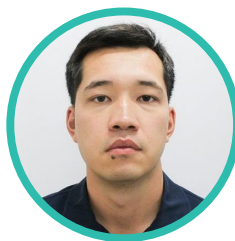


# Marat Amanzholov

## Automation Engineer

ideas and challenges - driven



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## WORK EXPERIENCE

### Automation & Process Control Engineer Tengizchevroil LLP

10/2016 – Present

Tengiz, Kazakhstan

Oil and Gas resources company

#### Achievements/Tasks

- Provided daily support and troubleshooting of Automation Electrical Systems (AES) across all Tengiz facilities (KTL, SGP/SGI, offplot) including but not limited to Schneider Electric (SE) SisGateways, SE Quantum/M340 PLCs, Hirshmann network switches and firewalls.
- Conducted On-Line Modifications (OLM) on live and critical equipment with prior: work-scope preparation, meeting organization with involved parties (Production Operations/ Power Operations/ Automation), modification implementation, and conducting required tests.
- Project support of ongoing Fast Load Shedding (FLS) System upgrade for Future Growth Project (FGP) in SGP LER10: involved in Site Acceptance Test (SAT), created a test procedure for upgrading the existing system, simplified the process of physical isolation of the FLS system during the upgrade.
- Involved in Turnaround (TA) activities in 2018 and 2019 for KTL 1 & 2 facilities: conducting Factory Acceptance Test (FAT), SAT, and commissioning for DMC4.1 and KTL RP-1 AES Upgrade Project, programming temperature barriers in FSC and HPM Systems, assistance with CCC System configuration and loop check tests.
- Demonstrated leadership and role model as a Behavioral Based Safety (BBS) program coordinator for Automation Department: provided coaching among co-workers, ensured awareness among Automation management with regards to BBS statistics, represented Automation group on biweekly FE BBS Leadership meetings.
- Took responsibilities of the Lead Automation Engineer position for the AES team: managed weekly team priorities, organized work and represented the team on weekly Control Systems group management meeting.

## EDUCATION

### Bachelor of Science in Electrical and Computer Engineering

University of Illinois Urbana - Champaign

08/2012 – 05/2016

GPA: 3.48/4.0

#### Courses

- Computer Systems Engineering
- Embedded Systems
- Data Structures and Algorithms
- Computer Organization and Design
- Distributed Systems
- Control Systems
- Power Electronics
- Electric Machinery

## SKILLS

Automation Electrical Control Systems

Industrial Networks

Programmable Logical Controllers

Python3

JavaScript

Back-end Distributed Systems

Algorithms and Data Structures

Full-Stack Web Development

React

## PERSONAL PROJECTS

### Field Programmable Gated Array and Computer Architecture Processor Design

- Developed skills in programming on System Verilog hardware design language
- Designed and developed educational model of CPU (x86 instruction set architecture based): data caches, pipeline processing design, instruction set architecture

### Electric Power Converter

- Designed and constructed a two-phase, interleaved DC-DC buck converter to handle half percent output voltage fluctuations and 10A output current
- Implemented a pulse width modulation generator and PI control with TI Launchpad microcontroller

### X Operating System

- Developed core of an operating system with interrupt descriptor table (IDT), paging support for the kernel and applications, system call interface
- Designed and implemented test procedures

## ACHIEVEMENTS

### "Bolashak" Scholarship (2010 – 2019)

Recipient of Kazakhstan Presidential International "Bolashak" Scholarship

## LANGUAGES

Kazakh

Native or Bilingual Proficiency

English

Native or Bilingual Proficiency

Russian

Native or Bilingual Proficiency

## INTERESTS

Office and home automation using Python

Snowboarding

Astrophotography