

# Kamila Bekshentayeva

OPEN FOR DESIGN TECHNOLOGY/ICT/COMPUTER SCIENCE TEACHING POSITION; FORMER: DT AND ICT EDUCATOR, SENIOR LECTURER, RESEARCH AND TEACHING ASSISTANT, DATA SCIENTIST, AI MENTOR

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## Education

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### Moreland University

PGCE (TEACH-NOW TEACHER PREPARATION CERTIFICATE PROGRAM), USA TEACHING LICENSE GPA: 4.00/4.00

Washington D.C., USA

November 2023 - June 2024

Course work and projects with a focus on culture of schooling, learning in a digital age, managing the learning environment, data driven instruction, role of families and technology for climate and culture of learning environment. Certificates: Postgraduate certificate in education, Praxis score reports: PLT and Computer Science

### Simon Fraser University

M. A. Sc. in ENGINEERING SCIENCE (MACHINE LEARNING, BIG DATA, COMMUNICATION NETWORKS), GPA: 4.20/4.33

Vancouver, BC, Canada

Teaching Assistant, Research Assistant

January 2019 - August 2021

### Pennsylvania State University

B. Sc. in ELECTRICAL ENGINEERING, GPA: 3.38/4.00

State College, PA, USA

August 2011 - May 2015

- **Boston University, Center of English Language and Orientation Program**, Boston, MA — May 2010 - February 2011
- **National University of Singapore**, Singapore, Singapore — Semester Abroad Spring 2014

## Certifications and Trainings

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- **Generative AI and ChatGPT for K12 Educators**, Vanderbilt University — August 2025
- **IB MYP Design cat. 2**, virtual — February 2025
- **Cross-Campus Workshop Leader**, Xiehe Education Group — 2024, 2025
- **District of Columbia Educator Credential**, OSSE — August 2024
- **IB MYP Design cat. 1**, virtual — February 2024
- **Design and Technology Association (UK) Approved Health and Safety Training Course Certification**, Beijing — 2024-2029
- **Google Agile project management**, September 2023
- **Mastercard Cybersecurity Virtual Experience program**, Summer 2023
- **KPMG Data Analytics Consulting Virtual Internship**, Summer 2023
- **Udemy: Spark and Python for Big Data with PySpark, Udemy: SQL - MySQL for Data Analytics and Business Intelligence**

## Teaching and Mentorship Experience

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### Shanghai United International School, Qingpu

Shanghai, China

DESIGN TECHNOLOGY, ICT, COMPUTER SCIENCE MS TEACHER

2024 - now

- Design Technology (Grade 7) — Guiding students through the full design process, integrating CAD/CAM, 3D modeling, and sustainable product design with a focus on inquiry-based, project-driven learning.
- ICT (Grade 6) — Teaching coding fundamentals, data handling, networks, and digital citizenship.
- Computer Science (Grades 7-8, IGCSE curriculum) — Delivering Cambridge-aligned content on programming, systems, and computational thinking. Integration of digital tools to enhance technological fluency.
- Integrating creativity and technology through CAD/CAM, 3D printing, and coding projects that emphasize real-world applications.
- Designing and teaching CCAs in 3D printing, Arduino, Girl Scouts, and AI, nurturing innovation and leadership.
- Facilitating STEM workshops in design thinking, cybersecurity awareness, AI, and inclusive digital education.

### Canadian International School of Beijing

Beijing, China

PLACEMENT TEACHING

2023 - 2024

- Under Moreland Teacher Preparation Certificate Program I was co-teaching Design Technology course to MYP, DP students (grades 9 – 12)
- Ensuring student-centered, dynamic and innovative teaching approach.
- Preparing lectures and activities based on MYP design cycle, DP SL and HL topics.
- Facilitating projects: educational toy, clock with brand identity (autocad, laser cutting), sustainable housing, design using recycled material.
- Valuing collaboration with colleagues to innovate, create, and refine, as well as embracing communication with all stakeholders.
- Contributing to the holistic (interdisciplinary) IB vision by supporting students in and outside of classroom.

## Astana IT University

Nur-Sultan, KZ

SENIOR LECTURER

2021 - 2023

- Design and Technology, Design Thinking, Introduction to Information Technologies, Cybersecurity; Information Security Fundamentals: designed curriculum, delivered lectures (200 students) and laboratory classes (each group: 25 students), evaluated students' performance; online and offline format.
- **After-school activities:** Writing for publications (students learned how to prepare research papers for international conferences and journals, learned IEEE standards and citation style); Research tools (students learned how to use Overleaf (latex)); Career development (career orientation, students prepared CVs, cover letters)

## Simon Fraser University

Vancouver, BC, Canada

TEACHING ASSISTANT

2019 - 2021

- Data Communication and Networking (under 100 students): Designed lessons, graded assignments and exams
- Final year project course: Engineering Technology and Society, Process, Form, and Convention in Professional Genres (delivered lectures to four small groups (each group approx. 25 students), graded assignments.

## USA Girl Scouts Overseas

Beijing, Shanghai, China

STEM MASTER, CURRENT SHANGHAI XUHUI GIRL SCOUTS LEADER

2023-now

- Facilitating troop meetings by guiding decision-making of hands-on activities appropriate to members' interests and abilities. Conducting all troop activities safely by adhering to GS Safety Activity Checkpoints and Volunteer Essentials procedures.
- Leading and designing STEM series meetings (the most recent meeting at Airbus Engineering Center at Shunyi: 80 girls)

## AI4ALL: Invent the Future

Vancouver, BC, Canada

PROGRAM MENTOR

Summer 2020

- During the program, thirty 9-12 grades female students were immersed in AI through a combination of lectures, hands-on research projects, and mentoring activities facilitated by me and other co-mentor.

## Technovation Challenge

Astana, Kazakhstan

GROUP MENTOR

Winter 2018

- Mentored first-year undergraduate students who developed a smartphone application that aimed to decrease the suicide rate among Kazakhstani teens, awarded the 2nd place in the nation-wide competition.

## Bastau English language summer camp

Almaty, Kazakhstan

CAMP COUNSELOR AND ENGLISH TEACHER

Summer 2011

- Supervised campers (7-15 years old) ensuring their safety in the Alatau mountain area, and supporting their skill achievement and general well-being. Created English lesson plans and facilitated and taught classes; took part in designing and facilitating daily events and activities.

## Other Experience

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### The Embassy of the Republic of Kazakhstan to the People's Republic of China

Beijing, China

TECHNICAL SPECIALIST

Temporary project, summer 2022

- Developing and maintaining WeChat application KazConsul that provides various consular services
- Conducting technical trainings and facilitating online meetings

### Ryte Health

Toronto, ON

DATA SCIENTIST AND DATA ANALYST

2021 - 2022

- Using NLP algorithms (BERT), decision trees, neural networks, as well as large data extracted from PubMed, governmental, and user review data. The AI solutions aimed to connect patients with appropriate world expert physicians identified by their research, location, domain of expertise, procedures, reviews, etc.
- Providing project management assistance to the team, using Agile, DevOps; conducting cybersecurity trainings

## Simon Fraser University

Vancouver, BC, Canada

RESEARCH ASSISTANT

2019 - 2021

- Network Intrusion Detection using Machine Learning, network anomalies and Internet Routing data analysis
- Virtual Network Embedding in Data Center Networks, using C++ based VNE-sim tool and VNE algorithms

### IBM

East Europe/Asia

SALES MANAGEMENT AND LEAD OPERATIONS SPECIALIST, CIS AND RUSSIA MM

2016-2017

- Coordinated weekly and monthly forecast process across CIS and Russia
- Participated in sales cadence, provided accurate information about the forecast numbers, key deals, pipeline, week-to-week changes, sales plays, monthly results

## Samsung Engineering

Almaty, Kazakhstan

QA ENGINEER

2015-2016

- Inspected civil and electrical works of subcontractors, was responsible requests for inspections, acts, non-conformance reports, quality observation reports

## Recent Publications

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**“K. Bekshentayeva and Lj. Trajkovic, ”Detecting Denial of Service attacks using echo state networks, ” in Proc. IEEE International Conference on Systems, Man, and Cybernetics**

*Melbourne, Australia*

*October 2021*

- Applied echo state networks to detect known DoS and DDoS attacks
- Used network intrusion datasets and collected border gateway protocol data for largest DDoS attacks in 2019-2020 to evaluate the echo state network models

**“A. L. Gonzalez Rios, K. Bekshentayeva, M. Singh, S. Haeri, and Lj. Trajkovic, ”Virtual Network Embedding for Switch-Centric Data Center Networks, ” IEEE Int. Symp. Circuits and Systems**

*Daegu-Gyeongju, South Korea*

*May 2021*

- Used D-ViNE, R-ViNE, GRC, GRC-M, Monte Carlo Tree Search based algorithms MaVEn-S and MaVEn-M
- Compared the performance of algorithms with switch-centric DCN topologies based on acceptance ratio, resources utilization, revenue to cost ratio, and processing time

**A. L. Gonzalez Rios, Z. Li, K. Bekshentayeva, and Lj. Trajkovic, ”Detection of denial of service attacks in communication networks,” IEEE Int. Symp. Circuits and Systems**

*Seville, Spain*

*October 2020*

- Employed CSE-CICIDS2018, CICIDS2017 data sets to create anomaly detection model using Broad Learning System
- Evaluated the performance based on accuracy, F-score, and training time

## Skills

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<b>Technical</b>	3D printing and design, Arduino, Agile, Python, PySpark, Pandas, DevOps, Jupyter notebook, Tableau, MySQL, Blockchain, Wireshark, ns3, Matlab, Linux environment, AWS Databricks platform, Azure Synapse, AI and Machine learning (NLP, regression, classification, clustering, decision trees, neural networks, normalization, regex), Research, Operations, $\text{\LaTeX}$
<b>Languages</b>	English (native-bilingual), Russian (native-bilingual), Chinese (beginner), Kazakh (intermediate), German (beginner)
<b>Teaching tools</b>	Student communication: Toddle, Class Dojo, Tapestry; Learning and course management: Moodle, Canvas, Angel, Managebac; Collaboration tools: Miro, Jamboard, Padlet; Quizzes: Kahoot, Quizlet, EdPuzzle, Moodle, Managebac
<b>Organizations</b>	USAGSO (leader), SCOLAR Beijing (Guest lecturer), Toastmasters (CC, CL), IEEE (past member, treasurer), Pennstate Global Programs (past ambassador), Pennstate Society of Women Engineers (past member), Tea Institute at Pennstate (officer)