

# Munkhtulga Battogtokh

Sambrooke Exhibition Prize Winner, King's College London BSc (Hons)

## EDUCATION

### BSc (Hons) Computer Science —King's College

SEPTEMBER 2016- PRESENT

#### Final-Year Project

- 3D scanning Judo fight scenes: “I want that on my table!”, I thought seeing a 360-view during World Championships.
- I aim to test AI and pre-knowledge approaches to produce 3d-printable/AR-compatible model from minimum input.
- Discovered photogrammetry, got poor results. Current technology takes many high-resolution photos, and heavy pre- post-processing; if I can imagine a scene in 3D from 2 images only (one from each eye), why can't a computer?

#### Personal project

- I aim to encode “judo scenes” from visual input and feed that to PDDL for list of potential techniques in the scene
- Tested if PDDL judo model produces tactics like humans’

Second Year Average Result 90 (1st)

- Foundations of Computing 2 94
- Programming Language Design 97
- Software Engineering Group Project 92

First Year Average Result 93 (1st)

- Introduction to Artificial Intelligence 94
- Foundations of Computing 1 96
- Elementary Logic with Applications 94

### International Baccalaureate diploma —Stockholm

SEPTEMBER 2013- MAY 2016

Mathematics Higher Level - 7/7 (percentile 91<sup>1</sup>)

Physics Higher Level - 6/7 (percentile 87<sup>1</sup>)

Economics Higher Level - 6/7 (percentile 87<sup>1</sup>)

## WORK EXPERIENCE

### Bank of America Merrill Lynch, London— Tech Analyst

June 2018 - June 2019

Research to optimise internal data-serialisation scheme (C++, UNIX)

- Achieved 10% process-level gain, saving 1000 nodes per process distributed to 10000. 100% faster hash-map
- Experimented hash-map techniques, tailored to use-cases

Software development (diagnostic analyses, Python, JavaScript, HTML...)

- Simplified analysis of file/project dependencies by building data-visualisation tool Depweb (Python Flask, D3)

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<https://github.com/MunkhtulgaB>

## AWARDS & RESULTS

**Sambrooke Exhibition in Natural Science 2017** highest-scoring student of Year 1/2 at King's.

**Full BSc tuition-fee sponsorship** by State Training Foundation, the government of Mongolia.

**Idea Factory Startup Idea competition** at KCL semi-finalist

**Maximum 800/800** both SAT Math & Math Level 2 (percentile 90)

**Gold & Silver** International Maths Competition Kangaroo (2011, 2010)

## SKILLS

Java, Python, C++, SQL

Experimental analysis

Git, Gradle, UNIX

Mobile-dev: Kotlin, React Native

HTML, CSS, JavaScript

D3, Bootstrap, JQuery, Flexmonster

NodeJS Express, Python Flask

## VOLUNTEERING

Crisis, 10K run for the homeless Providence Row, art session  
Anti air-pollution group admin

## INTERESTS

Art painting, animation, fashion  
Judo 1st Dan black belt.

## REFERENCES

Dr Alexander J Turner (BofA)  
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<sup>1</sup> <https://www.ibo.org/contentassets/bc850970f4e54b87828f83c7976a4db6/dp-statistical-bulletin-may-2016-en.pdf>