



Luca Seimon Mehl

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Profile

Age: 18

Nationalities: Swiss, American

Languages: English (first language, speak, read, write); French (speak, read, write)

I have a passion for computer science its optimization abilities, and have pursued it wherever possible (since CS is not offered at my school). I have taught myself a variety of coding languages and used personal projects for learning the theory behind them.

Education

INTERNATIONAL SCHOOL OF GENEVA, CAMPUS DES NATIONS – 2013-PRESENT

International Baccalaureate (Bilingual) Diploma Programme

Higher level courses: Math, Physics, Geography

Standard level courses: Chemistry, French, English

Extended Essay (Year 13): *Research question* – “What is the optimal tilt angle of a fixed-position polycrystalline photovoltaic solar panel located in Geneva, Switzerland with respect to maximum annual energy generation?”

Personal Project (Year 11): *Portable Weather Data Logger* – Designed to record and log atmospheric conditions while researchers (my uncle and aunt, a climate scientist and wildlife biologist) focus on their field activities in the Peruvian Andes. Equipped with: GPS, barometer, altimeter, hygrometer, thermometer, UV sensor, external water temperature probe. Comprises an Arduino base, coded in C++, with a 3d-printed enclosure.

Honors

EUCLID COMPETITION, THE CENTRE FOR MATHEMATICS AND COMPUTING – 2019

School champion. Previously, earned distinction & high distinction awards.

MYP ACADEMIC EXCELLENCE AWARD – 2018

For achievement across the eight subject groups in the IB Middle Years Programme, excellence in the Personal Project.

WORLD SCHOLAR'S CUP – 2015-2017

Team of 3 placed 1st in Switzerland (2016, 2017); 1st in Europe at two Global Rounds (2015, 2016); competed at Yale Tournament of Champions (2017).

Experience

STUDENTS' LEAGUE OF NATIONS – 2017–2019

Debated global resolutions at bilingual SLN, United Nations Geneva, as delegate from Mauritania (2017); Hungary (2018); UK (2019). As delegate of the UK, I co-authored and successfully gained consensus on a resolution establishing a UN Secretariat subsidiary for preventing and monitoring electoral interference.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY - BEAVER WORKS SUMMER INSTITUTE – 2019

At a month-long course at MIT, I worked in a team of 4 to process data from a radar module mounted on a drone, generating an image of an 'unseen scene'. After working collaboratively on custom Python algorithms in our teams for the last 2 weeks, my team won first place in the final competition.

STUDENT COUNCIL, INTERNATIONAL SCHOOL OF GENEVA – 2018-2019

Elected to 5-member student council for 1-year term. Main achievements: chaired campus advisory board meetings; worked on library redesign; organized annual school dance with 850 attendees; implemented single-use plastic ban; planned two school-wide climate strikes.

BRITISH EDUCATIONAL TRAINING AND TECHNOLOGY (BETT) CONVENTION, LONDON – 2019

Was selected as one of four students from Ecolint to accompany school principal to the BETT Convention to participate in sessions, and identify promising educational solutions; subsequently presented report to school board on tech innovations to invest in.

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE - MOBILE ROBOTICS COURSE – 2018

Attended a course in control systems and mobile robotics, taught by Prof. Francesco Mondada, at EPFL. We covered CS/robotics elements including control system programming, mapping/localization, behavioral algorithms, and recurrent neural nets.

CERN INTERNSHIP – 2017

Shadowed three sets of coders at the CERN Pension fund web development & algorithms department for 1 week for school "work week".

BANGLADESH INTERNSHIP – 2017

Spent 3-weeks in Bangladesh during the summer interning with father's colleagues: coders at mPower Social Enterprises (Dhaka), and community health workers at JiViTA mobile health project (Gaibandha).

Activities

BADMINTON CLUB – 2014-2019

I play with the BC Rousseau badminton club in Geneva, and compete in Regional tournaments several times per year.

DUKE OF EDINBURGH'S INTERNATIONAL AWARD (TEAM LEADER) – 2017-PRESENT

Bronze, Silver, Gold levels: completed activity, skill, service (each 52 hours), participated in 2x hiking/kayaking trips per year.

Programming Projects

NATIONS CODING CLUB – 2017-PRESENT

Co-founded my school's first coding club, which has now been running for 3 years with 10+ active members.

DIGITAL SCANNER SIGN-IN PROJECT – 2017-2019

Alleviated congestion for students filling out late-slips by creating a more efficient barcode-scanning system, attached to a receipt printer. Later, I reused the system for the 850-attendee school dance.

SOCIAL NETWORK ANALYSIS – 2017-2018

Visualized all friendships in year group and used analytical graphing techniques to deduce friend groups. Hosted resulting map of friendships and friend groups online.

Programming Languages

Taught myself HTML+CSS, JavaScript, PHP+SQL, Python+NumPy, using, among others, Khan Academy courses and MIT Intro to CS And Programming Using Python.