Dat-Chanh **Nguyen**

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Education

The Lucerne University of Applied Sciences and Arts *Luzern, Switzerland*

B.Sc. in Mechanical Engineering *2016 - 2020*

- **Major**: Product Design and Mechatronics
- **Project**: Collaborated to conceptualize and realize an autonomous, all-terrain robot, transporting cargo (based on Mars Rover design).
- **Bachelor thesis**: Develop a bioreactor as part of life supporting system for a moon habitat -
  Industry partner: SwissSpaceCenter (SSC) & European Space Agency (ESA - Biotesc: Space biology/medicine group) (2019)

KSR (Kantonsschule Reussbühl) *Luzern, Switzerland*

Highschool

- Major: Mathematics and physics

Skills

Engineering Tools	**CAD**: UNI NX, Autodesk Inventor/Fusion 360; **SPS**: TwinCAT3, Selectron CAP1131, CodeSys; **Computer Vision**: OpenCV4, MVTec HALCON; **Quality Management**: PFMEA, 8D, 5-Why: **FEM**: Ansys (Statics)
Programming	**Language**: Python, MatLAB; C/C++, Fortran, VBA, LaTeX; **Database**: MySQL/PostgreSQL; **Statistics**: MS Office (Excel), R/NumPy/Jupyter; **Version Control**: Git
Misc.	SAP, Qlikview (CAQ), gPDM Windchill, Navigator
Language	Vietnamese, (Swiss-)German, English, Italian (B1)

Experience

Bühler AG *Uzwil, Switzerland*

Internship in Product Management and D&D *Feb. 2019 - now*

- Market analyse: Benchmarking various product families in Business Component (BC)'s portfolio (i.e. filters, airlocks, pipe diverters) against competitors (on market share, and define optimal manufacturing cost/sales prices in Navigator), to maximise the margin-potential.
- CAQ: Analyse statistics of installation and customer complains, to identify the problem hotspots for further development opportunities.
- Support international Sales Dept. with creating/configuring quotations in Navigator, and offering technical clarifications (via standard sheets or in contact with Lifecycle-managers).
- Managing Design-to-Cost projects, to further reduce manufacturing cost (i.e. diverters).
- Analyse and improve the filter porfolio on explosion-protection as well as dust emission to satisfy the conformity requirements (ATEX/IEC-Ex, AEx-NFPA68, etc.) and components conformity requirements for food safety (FDA).
- Create safety analysis (SANA) for the conformity certification of the hopper filter LCCB.
- Building testing rigs, to test prototypes, specimen of suppliers: EPDM membranes, bearing rings, filter control units.
- Project management: Collaborate with worldwide production sites to standardize the universal motor, and support roll-out airlock, cyclone and filter on online sales platform.

Swiss Steel AG *Emmenbrücke, Switzerland*

Helper *Jul. 2018 - Sep. 2018*

- Support the annual revision of steel works (reservoirs, hydraulics crane systems).
- Carry out maintenance work at various parts of the production plant (of construction steel beams)

Hartmetall Estech AG *Hitzkirch, Switzerland*

Engineering Internship *Jul. 2017 - Sep. 2017*

- Assist in production hall
- Prepare quality control probes, before and after sinstering process.

Zimmermann Technik AG   *Luzern, Switzerland*

PARTIME WORKER
- Assemble and test magnet coils and various electronics systems/control cabinets.

SPOD - VSETH   *Switzerland*

SYSADMIN - OPERATING MANAGER   *Dec. 2013 - 2016*
- Debugging a legacy Ruby on Rails application and developing a new replacement
- ICT-support for Windows, Mac and Linux systems

Reiden Technik AG   *Reiden, Switzerland*

ENGINEERING INTERNSHIP   *Jan. 2013 - Apr. 2013*
- Assemble the combined milling and lathing CNC machines: RX-Serie (RX-10, RX14, and RX-18)

Extracurricular Activity

KCL - Kanu Club Luzern   *Luzern, Switzerland*

MEMBER   *current*
- Canadian canoe/kayaking

Scientifica, ETH Zurich and University of Zurich   *Zurich, Switzerland*

TEACHING ASSISSTANT   *2015*
- Supervise 4 groups of 10 to 15 children, aged from 10 to 14, for the workshop "Introduction to Robotics, with Thymio II".

TheAlternative.ch, [project 21]   *Zurich, Switzerland*

ASSISSTANT   *2014 - 2015*
- Helper and Troubleshooter at various Linux Installation Day events.

SCI Switzerland (Service Civil International)   *Switzerland*

MEMBER   *2010 - 2014*
- Help distributing used clothes and food for homeless people around St. Pauli, Hamburg at Alimaus St.Ansgar e.V.

(Personal) Projects

Amateur radio (HAM)

- HB3 - License
- Member of amateur radio club of HSLU: HB9HSLU

Develop a doctor office management application (ongoing)

- Collaboration with Dr. med. Khanh Tran (Dagmersellen)
- Retrieve patient and his/her insurance info from HIN(*Health Info Net AG*)
- Maintain an up-to-date medicine list (from Federal Office of Public Health Switzerland, BaG)
- Generate bills and send them to insurance companies (using MediData.ch service)

Build a weather station (complete)

- Coming in 2 versions: Handheld measure device and stationary measure station
- Measuring temperature, humidity (using DHT22) and pressure (using BMP085)
- Stationary station: 2 Arduinos connect with each other over 2.4 Ghz frequency using XBee 1mW Wire Antenna - Series 1

Build a hexacopter (complete)

- Payload: $\sim 700g$
- Controller: Paris SIRIUS with 3 axis gyroscope and GPS receiver

Design and build a tabletop CNC-Router (complete)

- 2.5D-machining/milling
- Material: polystyrene, wood, MDF, Plexi glas, Plastic PVC, etc.