High School in the USA

Honza Schenk

Who am I?

Honza Schenk

Graduated from Blacksburg High School (Virginia, USA) in May 2024

Software Engineering Student at the University of Waterloo in Canada

Primary interests: Autonomous software for robotics and unmanned aerial vehicle (UAV) applications

Blacksburg High School, Virginia

1,321

# of students

16:1

Students per Teacher

4

Years of study (14-18 years old)

Blacksburg High School

Lots of opportunities for career exploration:

➔ AP (Advanced Placement)
➔ STEM
➔ Agriculture
➔ Carpentry
➔ Culinary Arts
➔ More...

Flexible courses - you can take anything you want

AP (Advanced Placement) Courses

➔ **College-level classes**
   offered in high school

➔ **Standard curriculum**
   accepted by most US universities

   ◆ Standardized exam taken at the same time every year

➔ **Diverse selection**

   ◆ Calculus

   ◆ Research

   ◆ Computer Science

Plenty of after-school opportunities:

➔ **National Honor Society**
➔ **Marching Band**
➔ **Internships**
➔ **Sports**
➔ **Clubs**

FIRST Robotics

International program focused on 6-18 year old students

FIRST Lego League
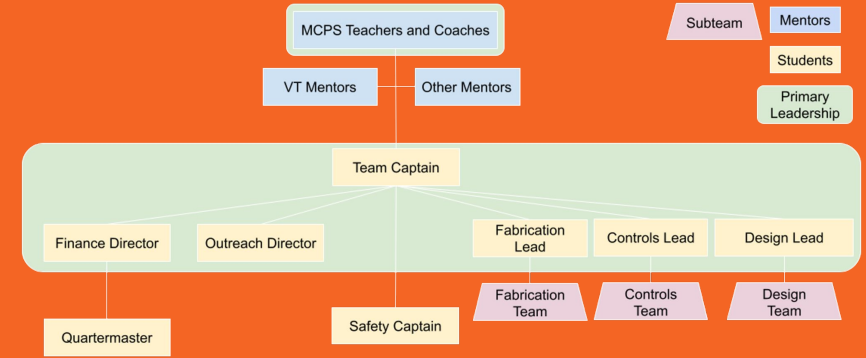

FIRST Tech Challenge

FIRST Robotics Competition

FRC Team 401 - Copperhead Robotics

➜ **Custom build a 56kg robot every year for competition**
  - ◆ **Design & Fabrication**
  - ◆ **Electrical**
  - ◆ **Software**

401 Team: Roles & Responsibilities

➜ Robust Leadership Structure

  ◆ Led 12-person software team in weekly standups

➜ Budget & Grant Writing

➜ Git Version Control and CI

➜ Gantt Charts

Subteam | Mentors | Students | Primary Leadership

MCPS Teachers and Coaches
VT Mentors | Other Mentors
Team Captain
Finance Director | Outreach Director | Fabrication Lead | Controls Lead | Design Lead
Quartermaster | Safety Captain | Fabrication Team | Controls Team | Design Team

Project	Status	Subteam	Complete at Shop?	Urgency 1 [High] - 5 [Low]	Point of Contact	Start Date	End Date	Jan 7	Jan 9	Jan 10	Jan 11
Driver Station	In Progress	Fabrication	Yes	3	Justin	Jan 7	Mar 3				
Drive Chassis	Complete	Design	Yes		Abby	Jan 9	Jan 17				
Prototyping	In Progress	Design/Fabrication	Yes		Abby + Justin	Jan 7	Feb 15				
Field Construction	Complete	Fabrication	Yes		Ash	Jan 7	Jan 14				
Complete Chairman's Essay	In Progress	Outreach	No		Ash & Emily	Jan 7	Feb 15				
Electrical CAD Schematics	In Progress	Electrical	Yes		Béla	Jan 9	Jan 27				
Assemble Batteries	In Progress	Electrical	Yes		Béla	Jan 14	Jan 21				
Improve Data App Reliability	In Progress	Scouting	No	2	Béla	Jan 7	Mar 5				
Design Electrical Mounting Plates	Complete	Electrical	Yes	2	Béla	Jan 19	Jan 27				
Part Orders	In Progress	All	No		Béla & Ash	Jan 7	Mar 5				
Boilerplate Code	Complete	Programming	Yes		Emily	Jan 25	Feb 1				
Data Analysis Google Sheet	Not Started	Scouting	No	3	Gideon	Feb 1	Mar 5				
Scouting Training	Not Started	Scouting	Yes	4	Gideon	Feb 1	Mar 5				
Vision	In Progress	Programming	Yes	2	Honzik	Jan 11	Feb 1				

Why join so many clubs?

Holistic College Applications

Accelerated Growth and Preparation for University and Career

Holistic College Applications

➔ Essays
➔ Club/Work Experience
  ◆ Programming Experience **Required**
➔ Video Interview
➔ Grades

Question 1: Tell us about a passion or strong interest of yours. How [and when] did you become involved in this interest [and for how long have you been involved]? What have you learned about yourself from this interest? How will you apply this knowledge as a student at the University of Waterloo? (900-character limit)

Question 2: Briefly describe a group, organization, or community that you have been involved in, are a member of, and/or have contributed to. What contributions have you made as a member of this group? Were you able to lead, influence others and/or influence decisions for the good of the group and its goals? How has your involvement helped make this community better? (900-character limit)

Question 3: Describe a situation where you were treated unfairly or witnessed someone else being treated unfairly. What did you do at the time and why? Would you do anything differently if the same situation occurred today? Has this event impacted or changed who you are now and if so, how? (900-character limit)

Question 4: What is your primary goal for attending the University of Waterloo? Have you explored, been exposed to, or have experience in the field you plan to pursue and if so, how? Did you turn to anyone for advice in exploring alternative options or backup plans for your goal and if so, how did this person help you? (900-character limit)

Question 5 - Outside the classroom: Please share what you were involved in outside of your studies – at school, in the community, or at home.

Question 6 - Special achievements, distinctions, and awards: If you have received any academic or non-academic awards or distinctions, please list them. Please provide the size of competition if you know how many people participated.

Accelerated Growth and Preparation for University

➔ I went into University with:

◆ Internship experience

◆ Java, Arduino, etc. programming knowledge

➔ I had greater confidence when picking my major

Thank you for your Attention

Any questions?

Studying at the University of Waterloo in Canada

Honza Schenk

University of Waterloo Stats

~42,500

Students

36,000 undergraduate
6,500 graduate

90.4%*

Computer Science employment rate after 6 months

*Key Performance Indicators - University of Waterloo 2023

Over 100

Undergraduate programs ranging from kinesiology to nanotech engineering

Software Engineering

➔ Unique dual-faculty program

 ◆ Mathematics

 ◆ Engineering

➔ Combines mathematical theories with real-world engineering

Waterloo's Unique Co-op Program

4-month alternating terms (school and work) - 3 semesters per year

- ➔ For many degrees, co-op is required
- ➔ Builds real-world experience
- ➔ Large network, so finding a job is easier
  - ◆ Blackberry, Google
- ➔ Graduate with up to 2 years of work experience

Design Teams

➔ **38 student teams - Drones, rockets, neurotechnology, etc.**

➔ **Learn collaborative skills (teamwork)**

➔ **Network with future colleagues**

Clubs for Social Good

➔ **Benefit the local community**
➔ **Encourage high schoolers**
➔ **Benefit University image**
➔ **FRC Event**
➔ **Techyon**
  ◆ **HackTheNorth**
  ◆ **UW Blueprint**
  ◆ **Microgrants**

Hackathons

24-hour competitions where students build a project, network, and learn new skills

Hack the North

MLH

GroupMe

Projects and Funding:

Lots of funding opportunities giving student chances to shine.

➡ **Professional Development Fund ($750 CAD)**
➡ **Grants**
➡ **Velocity - Incubator Program**
   ◆ **500+ startups**
   ◆ **40B CAD in enterprise value**

Thank you for your Attention

Any questions?