

OHJELMISTOKEHITTÄJIEN KILTA

A business perspective on teaching

Ulisses Camargo

ulisses@mindhive.fi

<https://www.linkedin.com/in/ulissescamargo>



OHJELMISTOKEHITTÄJIEN KILTA

A business perspective on teaching

1. Identify the need
2. Reverse engineer the solution
3. Discuss the role of companies in doing so

NB: Thought-provoking content! Conversation starter.

Ulisses Camargo

Data Scientist
AI specialist

Production manager
Talent acquisition

+358 50 3219 706
ulisses@mindhive.fi

<https://www.linkedin.com/in/ulissescamargo>

I'm interested in product development, AI and data-science, and digital technology. I have a PhD in quantitative sciences and am experienced in teaching for undergraduate and postgraduate degrees both in Brazil and Finland.

I am currently involved with professional software development and digital product design.

Curious.

Studying

Teaching

Supervising

Recruiting

Managing

WHAT?

Expertise

Enable digitalization

Modern software experience

Business understanding

Problem solving

Value creation

WHY?

Design thinking

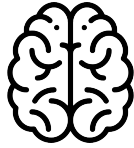
Multidisciplinarity

Processes and tools

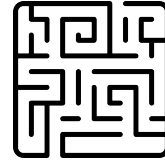
Tech stack

HOW?

Analytical
thinking and
innovation

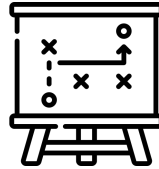


Critical thinking
and analysis



Active learning
and learning
strategies

Creativity,
originality and
initiative



Resilience, stress
tolerance and
flexibility



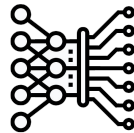
Complex
problem solving

Technology
design and
Programming



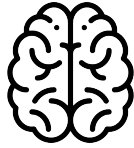
Leadership
and social
influence

Reasoning,
systematization
and ideation

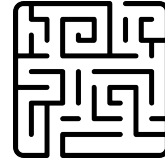


Technology use,
monitoring
and control

Analytical
thinking and
innovation

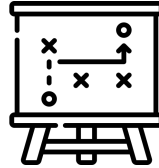


Critical thinking
and analysis



Active learning
and learning
strategies

Creativity,
originality and
initiative



Resilience, stress
tolerance and
flexibility



Complex
problem solving

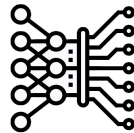
Technology
design and

Programming



Leadership
and social
influence

Reasoning,
systematization
and ideation



Technology use,
monitoring
and control

As a recruiter,
I search for:

Curiosity, clear
communication,
systematic and **systems**
thinking, and basic
understanding of
business logic.

+

Technical and
soft skills

How do we create modern learning environments to educate problem-solvers?

That can identify and solve
valuable real-world problems

Lifelong learner, growth mindset

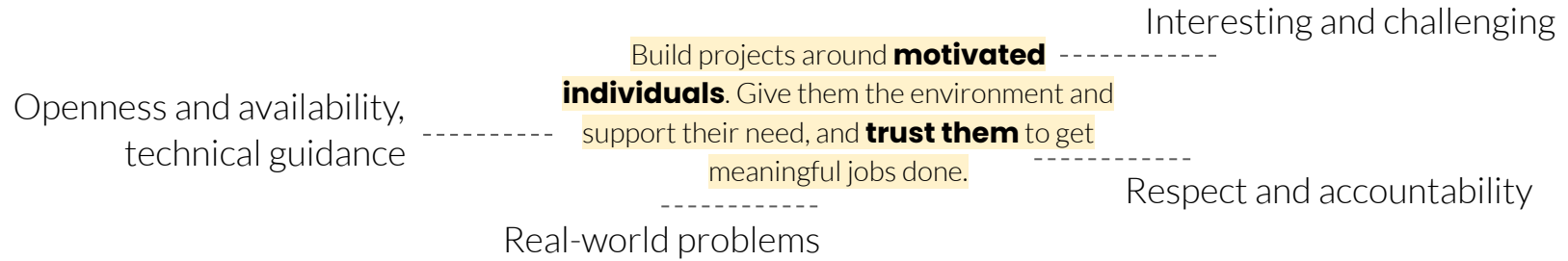
Listening, writing, speaking,
and coding

Value generation

Curiosity, clear
communication,
systematic and **systems**
thinking, and basic
understanding of
business logic.

Complex intercorrelated systems

Build projects around **motivated individuals**. Give them the environment and support their need, and **trust them** to get meaningful jobs done.



- Let them do independent work
- But show paths, actively guide
- Challenge them to raise the bar
- But be realistic as in real life
- Make them explore uncomfortable places

Interesting and challenging

Build projects around **motivated**

individuals. Give them the environment and support their need, and **trust them** to get meaningful jobs done.

Openness and availability, technical guidance

- Domain-specific theory
- CS and programming theory
- Guide by example
- Support on what they are missing
- Boost their qualities
- Offer state-of-the-art paths

Real-world problems

- Offer challenges as they appear in life.
- Present cases, not problems
- Let them identify the problem
- Let them create the solution
- Let them showcase the value

Respect and accountability

- Trust that interested people commit to work
- Provide honest and transparent feedback
- Help them to organize work
- Stimulate them to act as self-organizing teams
- Ask questions, feelings and desires

The problem with the **YouTube** tutorial teacher.

- Let them do independent work
- But show paths, actively guide
- Challenge them to raise the bar
- But be realistic as in real life
- Make them explore uncomfortable places

Interesting and challenging

Build projects around **motivated individuals**. Give them the environment and support their need, and **trust them** to get meaningful jobs done.

Openness and availability, technical guidance

- Domain-specific theory
- CS and programming theory
- Guide by example
- Support on what they are missing
- Boost their qualities
- Offer state-of-the-art paths

Respect and accountability

- Trust that interested people commit to work
- Provide honest and transparent feedback
- Help them to organize work
- Stimulate them to act as self-organizing teams
- Ask questions, feelings and desires

Real-world problems

- Offer challenges as they appear in life.
- Present cases, not problems
- Let them identify the problem
- Let them create the solution
- Let them showcase the value

The problem with the **YouTube** tutorial teacher.

- Let them do independent work
- But show paths, actively guide
- Challenge them to raise the bar
- But be realistic as in real life
- Make them explore uncomfortable places

Interesting and challenging

Build projects around **motivated individuals**. Give them the environment and support their need, and **trust them** to get meaningful jobs done.

Openness and availability, technical guidance

- Domain-specific theory
- CS and programming theory
- Guide by example
- Support on what they are missing
- Boost their qualities
- Offer state-of-the-art paths

Respect and accountability

- Trust that interested people commit to work
- Provide honest and transparent feedback
- Help them to organize work
- Stimulate them to act as self-organizing teams
- Ask questions, feelings and desires

Real-world problems

- Offer challenges as they appear in life.
- Present cases, not problems
- Let them identify the problem
- Let them create the solution
- Let them showcase the value

Feeling of usefulness

Sense of belonging

Commitment to do meaningful work

“This past week I think I can speak for everyone in my class that it was very educational, helpful and a fun course.”



The memory card game developed by group 3

“I am very pleased about this course and it didn’t leave me a feeling that it was not useful. I learned a lot of new things that surely will come handy in workplace. I wish you a good summer!”

“The course exceeded my expectations. I learned a lot more on the topic but also about group work, group dynamics and different ways to work on a group project. It was nice to know more of the work-related requirements of a job-applicant and tips how to get a job in the field of software engineering. This course as the last of the spring left me good impressions and a motivation to learn more during the summer and in the fall!”

“This was the last course of the year, and it was a great way to end the first year of studies. It gave more insight into the daily life of a software developer than all our other courses so far. I hope that these kinds of group project elements are implemented in our other programming courses.”

“I honestly think that this week was the best course of the first year. It was so informative, well-structured and those coding projects were challenging but easy enough to get it done in one week. If real professional software developing life is like this miniature project, I definitely going to like it and hopefully I will get job like this after the graduation.”



Product Owner

Responsible for maximizing the value of the product.



Scrum Master

A coach that facilitates and monitor the sprint process.



Development team

The specialists doing the work.



Sprint planning

At the start of a sprint (2-4h)



Daily stand up

Once a day (15 minutes)



Sprint review

At the end of a sprint (1-2h)



Retrospective

At the end of a sprint (45m)



Backlog refinement

Throughout the sprint



Not a school

Not a place to teach the basics



Small budget

i.e., little time to invest



Profit Organization

Focus on being profitable



Difficult to commit

Not everyone in an organization will take part

Ulisses Camargo

Data Scientist
AI specialist

Production manager
Talent acquisition

+358 50 3219 706
ulisses@mindhive.fi

<https://www.linkedin.com/in/ulissescamargo>