



**CIPRIAN FLOREA**

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SOFTWARE  
ENGINEER

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## WORK HISTORY

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### **Research and Teaching Assistant**

**University of Oulu, Center for Ubiquitous Computing, Oulu, Finland, 2017 to 2019**

- Research and development in ubiquitous computing and perception engineering. Part of the unit supervised by Prof. Steven LaValle, co-founder of Oculus VR.
- Developed web and virtual reality applications covering topics such as WebVR, user involvement, 3D user interfaces, 3D game engines, smart city.
- Assisted Dr. Anna LaValle, Oculus research scientist, in teaching a course titled VR Systems and Humans that covered VR systems, human physiology, human perception and neuroscience, perceptual training, comfort and VR sickness.
- Worked with researchers from different backgrounds including engineers, designers, and user experience experts.

### **Software Developer**

**Playsign Ltd, Oulu, Finland, 2015 to 2017**

- Designed and developed interactive urban planning tools, VR apps, and 2D mobile games.
- Developed Co-design by Playing, a co-design, communication and game-like 3D-environments tool, and MindMyths, an immersive mindful meditation VR app.

### **Programmer**

**Happy Hobgoblin Ltd, Oulu, Finland, 2014 to 2015**

- Developed a multiplatform digital board game, later published on Steam, Google Play, and App Store.

## ACADEMIC BACKGROUND

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### **Master of Science in Technology in Computer Science and Engineering**

**University of Oulu, Oulu, Finland, 2018 to 2019**

Thesis: Virtual reality interface for the PATIO user involvement tool

### **Bachelor's in Computer and Software Engineering**

**Politehnica University of Timișoara, Timișoara, Romania, 2012 to 2016**

Thesis: Co-design by playing

## ADDITIONAL TRAINING AND EDUCATION

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### **Workshop: From Reality to Virtuality: The Science and Art of Creating VR Experiences** **University of Oulu, Oulu, Finland, 2019**

Studied software and VR frameworks, 3D user interfaces, and multimodal immersive user experiences.

### **Workshop: Virtual City Models** **University of Oulu, Oulu, Finland, 2017**

Studied a virtual 3D city pipeline and techniques to acquire, process and visualize urban data.

### **Oulu Game Lab** **Oulu University of Applied Sciences, Oulu, Finland, 2014 to 2015**

Training and development program focusing on the gaming industry.

### **Certificate in Advanced Topics in 3D Computer Graphics** **Saguaro Technology Inc., Timișoara, Romania, 2014**

Studied 3D computer graphics: the world we see vs. the world we render, patterns used in game engines, optimizing the level of detail, graphic engines, animations and collisions.

## PUBLICATIONS

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Florea et al. (2019). **Extending a User Involvement Tool with Virtual and Augmented Reality**. In IEEE VR 2019.

Alatalo et al. (2017, June). **Two real-world case studies on 3D web applications for participatory urban planning**. In Proceedings of the 22nd International Conference on 3D Web Technology (p. 11). ACM.

## ADDITIONAL PROJECTS

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**Virtual Library:** Helped implement a VR application developed together with the Oulu City Library. Users can explore the Virtual Library through a VR headset.

**User Involvement Tool PATIO:** Created a VR client for user feedback collection, and a web tool that works as a moderator creation editor. These tools offer an approach to collecting feedback about activities taking place in VR 3D spaces.

**GoNature Augmented:** Integrated a plant identification machine learning solution into an

online gamified mobile app that collects and identifies plant types using image recognition.

**CommentHunter:** An Android app for storing messages in a specific location.

**LimpingApp:** An Android app for measuring gait movement by leveraging a smartphone's accelerometer sensor.

**HateSpeechApp:** A program for recognizing and categorizing hate speech from reddit comments using natural language processing techniques.

## PROFESSIONAL SKILLS

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### Experienced

C#	Java	VR & WebVR, AR/MR	Unity/Unreal engines	3D UI/UX
Git/Github	Game development	3D graphics	RESTful Web API	3D visualizations

### Secondary Skills

Web development (HTML, CSS, JavaScript)	Photogrammetry	C++
Natural language processing	Python	2D/3D animation

## LANGUAGE SKILLS

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English	Romanian	Finnish (beginner)
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## RECOMMENDATIONS

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On request.