Join us !

CEVA DSP est leader mondial des cœurs de propriété intellectuelle (IP) de traitement de signal et de connectivité sans fil. Les IPs CEVA couvrent des domaines aussi variés que les technologies de vision, de communication (LTE, 5G), de connectivité sans fil (WiFi, Bluetooth) et de traitement audio.

RivieraWaves, filiale sophipolitaine de CEVA depuis 2014, est aujourd'hui une référence sur le marché des propriétés intellectuelles WiFi et Bluetooth. Ses IPs sont utilisées dans une multitude de produits : téléphonie mobile, matériel médical, sport, divertissement, systèmes industriels et autres capteurs sans fil. **RivieraWaves** fournit à des compagnies de semi-conducteurs le logiciel, la radio et les blocs digitaux en vue de leur intégration dans des ASICs.

__CEVA__ DSP is the leading licensor of signal processing Intellectual Property for a smarter, connected world. Ceva's IPs cover a versatile range of end markets, including vision technologies, mobile communication (LTE, 5G), wireless connectivity (WIFI, Bluetooth) and audio processing.

__RivieraWaves__, a French Subsidiary of CEVA since 2014, is now a reference on the WIFI and Bluetooth IP markets. Its IPs are used in a wide range of products: mobile phones, medical devices, sports, entertainment, industrial systems, and wireless sensors amongst others. __RivieraWaves__ provides to semiconductor companies the software, radio and digital blocs for integration into ASIC.

Sujet de stage / Internship subject

AI assistance for Bluetooth Reception

Voir au verso pour le descriptif / *See at the back for description*

Why to join us?
☺ Technologie de pointe, projets à haute valeur technique
☺ Ambiance sympa dans un environnement international
☺ Conditions de travail stimulantes qui vous permettront d'être impliqué dans des tâches variées sur des technologies de pointe

  ☺ *Exciting cutting edge technology, high technical value projects*
  ☺ *Friendly atmosphere in an international environment*
  ☺ *Stimulating working conditions which will enable you to be involved in various tasks on cutting edge technologies*

When ?
Stage 6 mois, démarrant de préférence au 1er trim. 2020 / *6-months internship, preferred start date in Q1-20*

Where are we based?

6500 Avenue 6000
Cork Airport Business Park
Cork
Ireland
T12 Y56E

Find us on the web:
http://ceva-dsp.com

Contact : rw-hr@ceva-dsp.com

AI assistance for Bluetooth Reception

The internship will take place in CEVA-**RivieraWaves'** bluetooth team, with the co-operation of the CEVA-**RivieraWaves'** algorithms development team.

CEVA-**RivieraWaves'** currently provides a range of Bluetooth solutions, including BR/EDR and Low Energy up to version 5.1, and is currently developing more advanced solutions.

The **RivieraWaves** Bluetooth solution relies on the ability to detect incoming data in a noisy environment. While the current solution uses traditional signal processing techniques to achieve a high performance, it is proposed to investigate whether **machine learning/artificial intelligence** can be used to improve this performance.

The internship will initially involve the design and simulation of **machine learning** techniques such as **Neural Networks**. If successful the designs will be implemented in hardware to be tested using a FGPA development board.

In this internship the trainee will discover the Bluetooth protocol and various digital signal processing concepts. In addition the trainee will become familiar with machine learning concepts and techniques such as logistic regression, Neural Networks and backpropagation.

The mission is:
- Develop Machine Learning algorithms to aid Bluetooth reception
- Train these algorithms and determine their performance
- Implement these algorithms in hardware
- Test this hardware implementation in the lab

Student profile:
- Bac +5 , last year of Engineering school / **BEEE** internship
- Familiarity with MATLAB or equivalent mathematical development language
- Familiarity with Verilog, SystemVerilog or VHDL
- Strong Digital Signal Processing knowledge
- Any knowledge of Machine Learning or AI principals would be valued
- Autonomous, communicative, with strong team spirit , relational and organizations skills

Join us !

Pour postuler / How to apply?

Envoyez votre CV avec le titre du stage souhaité en référence à
Please send your cv with desired internship title in object to:

rw-hr@ceva-dsp.com