MEOPAR
MARINE ENVIRONMENTAL OBSERVATION PREDICTION & RESPONSE NETWORK

exactEarth®
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Internship at exactEarth: HQP Call for Applications

Background
In October, 2014, MEOPAR and exactEarth.Ltd entered into a Partnership agreement under the MEOPAR Partnership Program.[1] Key to the success of this initiative, which contributes to MEOPAR achieving its vision, is developing and sustaining mutually beneficial partnerships. These partnerships enable us to share expertise, transfer new knowledge, train our HQPs outside the academic environment and build marine science research capacity.

A deliverable of this partnership is the provision of two internship opportunities by exactEarth for MEOPAR HQPs in the 2016/17 fiscal year. Internships are an opportunity for our HQP to obtain industry employment experience while still working on a MEOPAR research project, with the end goal of securing employment post-MEOPAR, which is one objective of MEOPAR's training program. An example of a similar industry internship initiative is the MITACS Accelerate Program (http://www.mitacs.ca/en/programs/accelerate).

These internships with exactEarth are timely because they will occur in the final year of MEOPAR's first funding cycle and will provide industry (satellite AIS data) experience the HQP may not have otherwise. We expect that the majority of our HQP will complete their research on MEOPAR projects by March 31, 2017 and are/will be seeking subsequent employment. The internship responsibilities provide career experience the HQP can state on one's CV when applying for employment.

About exactEarth (www.exactearth.com)
Founded in 2009, exactEarth was established for the purpose of making Satellite AIS data services available to the global maritime market. Based in Cambridge, Ontario, Canada, exactEarth leverages advanced microsatellite technology to deliver vessel monitoring solutions characterized by high performance, reliability, security, and simplicity.

[1] http://meopar.ca/uploads/MEOPAR-Partnership-Plan-20131.pdf

The Opportunity
exactEarth seeks to host two HQP interns who will each work in the Product Development group on one of the two following projects:

i) Custom Density Maps

Density maps are the best tool to perform visual analysis in an easy to consume format. Data on shipping density patterns can be particularly useful in assessing ship strike risk and developing mitigation measures as well as analyzing the efficiency of shipping routes. Density maps can also be used to determine traffic patterns in particularly sensitive areas of interest such as Marine Protected Areas, to investigate ships traversing through them. A Density Map is created by counting the number of line segments of ship tracks that intersect predefined cells that is then mapped as a range of color codes. Currently, these maps are created by running a script for standard cell resolution for the entire world on a month by month basis. This may limit what some customers want and therefore **exactEarth is looking for a Developer to automate the way Density Maps are created.** The new service will allow the user to configure choose the type of map, the area, the duration and the cell resolution.

ii) Vessel Incident Reporting

The concept is that a user is investigating an incident: an oil spill, a collision, a cable cut, etc. They may not know the vessels involved in the incident, but they know the approximate time and location and want information on all possible suspects. The user goes to the exactEarth e-commerce website and enters the coordinates of a point, a date, and a time. The user selects which additional options they wish to purchase (described below): the basic product (a PDF), or the premium product (a PDF plus the raw data in CSV format). The user enters their payment and contact info and receives an email receipt/order confirmation. On the server end, a query will be run against the Production Archive extracting all data within a 50 NM radius of the user's defined point within +/- 24 hours of the time of incident. exactEarth is **looking for a Developer to take this concept and make it into an actual reporting service.**

HQP Eligibility
1) A Bachelor's or Master's student currently hired by a MEOPAR-funded Principal Investigator whose research project is using, will have access to, or will need exactAIS Data (preferably, but not exclusively)
or
2) A Bachelor's or Master's student identified/nominated by a MEOPAR Principal Investigator but who is not employed by the nominating PI; i.e., a 'MEOPAR-associated HQP.'

Skills
For both projects, exactEarth seeks **developers who have experience in Java and/or Python**. Knowledge in a relational database like Postgres would be advantageous. Knowledge of Spark and Big Data concepts are an asset but not necessary.

Duration
The internship will be four months, e.g., May to August, 2016, negotiable. The internship will include an orientation about exactEarth 2-4 weeks prior to the internship start date, which will be determined between the HQP intern and exactEarth. As per the parties' partnership agreement, the internship(s) and assessment of the internship experience for all parties, should be completed no later than March 1, 2017 to ensure the partnership funds are spent and accounted for prior to fiscal year end. The HQP's employment/studies end date with MEOPAR must not be prior to the contracted end date of the internship with exactEarth.

Location
exactEarth: 60 Struck Court, Cambridge, ON, N1R 8L2

Remuneration
Salary of $15,000 less any applicable deductions required by law. For the duration of the internship, the successful intern(s) will only be paid the internship salary; the HQP's MEOPAR project salary will be suspended for the internship.

Expenses
Upon completion of the internship, MEOPAR will reimburse travel-related expenses (in accordance with the Dalhousie University travel policy), incurred by the successful HQP intern(s) to/from Cambridge, Ontario. All other internship-related expenses, e.g., accommodation in Cambridge, etc., will be the responsibility of the HQP intern(s) and will not be reimbursed by MEOPAR or exactEarth.

Assessment
At midterm and upon conclusion of the internship, we will assess:

- The HQP intern experience (by the HQP)
- The HQP intern performance (by exactEarth against the Scope of Work/Deliverables identified by exactEarth)
- exactEarth's experience as a partner for the internship (by exactEarth)
- MEOPAR's experience as a partner for the internship (by MEOPAR)

Conditions/Exclusions
While interning with exactEarth, the HQP will not be an employee of this partner.
The internship does not guarantee/imply future employment of the HQP by either of the partners nor does the internship guarantee/imply the HQP acceptance of prospective employment with either of the partners.

Application Process
By March 31, 2016, email your application to Human.Resources@exactEarth.com:

1. a cover letter stating for **which project you wish to intern, which includes:**
    a. A personal introduction: academics, research expertise, career goals, etc., including prior similar academic experiences (co-op, service learning, etc.)

   b. A goal statement about the internship experience
   c. Describe the relationship between your MEOPAR research project and exactEarth, if applicable
   d. Describe how the internship will benefit/contribute to/advance your MEOPAR research project; what new and/or transferable skills do you expect to acquire or develop from the internship?
   e. State how you will share/disseminate your internship experience (on-going and after completion) to MEOPAR, the other MEOPeers, marine science community, etc.
2. Your Curriculum Vitae
3. A list of 3 references (a combination of employment and academic)
4. A letter of support from your research supervisor; the HQP and the supervisor must agree about the HQP's absence from the MEOPAR research project and the work responsibilities not completed while the HQP is interning
5. A travel expense estimate to/from Cambridge, Ontario

Selection/Notification Process
exactEarth will determine its intern selection criteria and acknowledge all HQP applications. Successful applicants will be notified and interviewed in April 2016 and interviews may be conducted virtually or onsite; if onsite, travel-related expenses will be the responsibility of the HQP applicant and will not be reimbursed by MEOPAR and/or exactEarth.

Questions?
Please contact Rajiv Taneja, Regional Sales Manager, exactEarth
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or

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