Job Title	Embedded Developer / Software Engineer
PVN ID	RC-2207-004973
Category	Research
Location	CUNY-ADVANCED SCIENCE RESEARCH CENTER
Department	Next Gen Environmental Sensor Lab, Envir
Status	Full Time
Annual Salary	$90,000.00 - $90,000.00
Hour(s) a Week	35
Closing Date	Jun 06, 2024 (Or Until Filled)

General Description

NYC FloodNet Embedded Developer
Full Time
3 Year Funding Contract

FloodNet is a cooperative of communities, researchers, and New York City government agencies working to better understand the frequency, severity, and impacts of flooding in New York City.

FloodNet will be responsible for manufacturing, deploying, operating, and maintaining a citywide flood sensor network totaling up to 500 active sensors across the 5 boroughs. A core component of FloodNet is the collection of actionable flood data that will be open-sourced and made freely available to our key groups of stakeholders: community members, City agencies, and researchers. FloodNet brings together innovative sources of information on street flooding impacts in neighborhoods that are vulnerable to high tides, storm surge, and stormwater runoff. As the project progresses, the FloodNet team will work closely with NYC Department of Environmental Protection (NYC DEP) to ensure a smooth transition to City ownership and maintenance of the deployed sensors at the termination of the project.

We are seeking an Embedded Developer to join our team to work on the development of our flood sensor firmware and data analysis pipelines including the implementation of: efficient, modular, configurable, and resilient microcontroller firmware; testing protocols to ensure firmware resiliency and reliability; open source documentation detailing firmware integration and operational procedures; and analysis and processing pipelines for time series data.

This is an annual contract that can be renewed for up to 3 years, with funds allocated for up to 5 years to pay for services on a consulting basis contingent on funding availability. This position would be managed by the CUNY Advanced Science and Research Center (ASRC) with an office at the NYU Center of Urban Science and Progress or CUSP (located in Downtown Brooklyn). This is an exciting opportunity to work directly with other members of the dynamic

and interdisciplinary FloodNet team, as well as interface with colleagues in NYC agencies and a diverse group of community partners. There is the possibility of remote work subject to project demands.

Other Duties

The required candidate skills and experience:

- Degree in computer science or related field with experience working in Embedded Development positions
- Proficiency with C and C++
- Strong knowledge of hardware architectures e.g. ARM
- Familiarity with hardware protocols including: UART, I2C, SPI, and USB
- Excellent diagnostic skills
- Experience working within tight power budgets on constrained devices
- Experience open sourcing codebases
- Strong organizational and project management skills
- Excellent verbal communication skills
- Exceptional problem-solving skills
- Demonstrated experience collaborating and working on a team

Experience with any of the following would be desired:

- The STM32 range of microcontrollers
- Knowledge of embedded security protocols
- Experience working with LoRaWAN and it's over the air (OTA) update processes

Qualifications

The team encourages applications from women and others from communities traditionally underrepresented in computer science and engineering.

To apply, submit your resume, cover letter and examples of related past projects including your specific role within them.