

Qiuchen Yan

**PhD candidate at
the University of
Minnesota**

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Oege De Moor
CEO, Semmle
44 Montgomery St. Floor 3
San Francisco, CA 94104

Dear Zac Wallis,

I am writing to apply the software engineering/research intern position at Semmle.

As a current PhD student, I have been working on several research projects about program analysis and its application in security or software testing. Symbolic execution is the technique I used most often. I have both improved a symbolic execution tool (written OCaml) and applied this technique in various contexts, including vulnerability detection (based on DARPA Cyber Grand Challenge benchmark), large scale software testing and OS kernel bug verification. Static analysis is another technique I have been working with. I built a prototype of a type inference system from scratch, which applied static analysis to GNU core utilities and achieved 96% true positive rate.

I also gained some experience working with Linux kernel and virtualized environment from my past projects. Although my previous work are less relevant to network security, I have a certain level of knowledge in this area acquired from courses and seminars, and I am interested in growing my skills in this area.

Thank you for your time and consideration. I hope to interview for this position at your earliest convenience.

Sincerely,

Qiuchen Yan