

# Analysis and Defense of Automotive Networks Prereqs

---

## Speaker Contact:

Samuel Hollifield  
hollifieldsc@ornl.gov  
Twitter: @cyrodox

Although (in theory) any operating system can be used during this precompiler, I highly recommend using Windows. I developed this talk on a Windows machine, so any bugs or discrepancies that arise from Linux/macOS quirks may require additional troubleshooting that won't be available during the precompiler.

## Hardware

All will be provided at the precompiler:

- Teensy3.6 (<https://www.pjrc.com/store/teensy36.html>)
- WaveShare SN65HVD230 CAN Transceiver Board (<https://www.waveshare.com/sn65hvd230-can-board.htm>)
- Male OBD-to-Pigtail (<https://www.amazon.com/iKKEGOL-Connector-Diagnostic-Extension-Pigtail/dp/B07F16GPMB/>)
- USB to Micro USB (for power/connectivity)
- Assorted GPIO cables and LEDs

If you wish to keep the hardware afterward, please purchase the eventbrite ticket prior to the precompiler. You can still attend the talk for free, but kits will be given to those who paid first.

## Software

Please install and configure the following software to be prepared for the talk:

- Arduino 1.8.10 (<https://www.arduino.cc/en/main/software>) Note: At the time this document was written, 1.8.10 is the latest version. If Arduino updates before CodeMash, newer versions will likely be incompatible with the Teensy hardware. Be sure to use 1.8.10, 1.8.9, 1.8.8, 1.8.7, or 1.8.5. Other versions are not supported by the TeensyDuino addon.
- TeensyDuino Add-On ([https://www.pjrc.com/teensy/td\\_download.html](https://www.pjrc.com/teensy/td_download.html)) Note: This allows us to use the Arduino IDE with the Teensy hardware.
- SavvyCAN (<https://www.savvyCAN.com/>) Note: SavvyCAN is a cross-platform tool to help organize and collect CAN data.
- PuTTY (<https://www.chiark.greenend.org.uk/~sgtatham/putty/>) ~~Note: PuTTY is used in this talk to save the serial output from the Teensy to a file. Other terminals may be used, but support during the talk will be limited if there are any issues.~~ Note: PuTTY is no longer required as it wouldn't properly save files.

## Here are new prereqs as of 1/2/2020

- Python3 (<https://www.python.org/downloads/>)

- matplotlib 3.11 (<https://matplotlib.org/users/installing.html>) Note: matplotlib is used with python3 to analyze CAN data captured from the Teensy hardware.