Making things smarter

Zach Shelby
Co-founder and CEO
The Compute vs Transmit Inflection Point

<table>
<thead>
<tr>
<th>Data (kb/s)</th>
<th>Power (mW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 kbps</td>
<td>Radio</td>
</tr>
<tr>
<td>250 kbps</td>
<td>LPWAN</td>
</tr>
<tr>
<td></td>
<td>BLE</td>
</tr>
</tbody>
</table>

ML Compute
The 1st Wave – Code Things

- Application
- Kernel and Drivers

1980s Machine Code, Embedded, Safety
The 2nd Wave – Connect Things

- C++
- JS
- Py
- OS
- Libs
- Security

2010s: Interpreted, Connected, Secure

1980s: Machine Code, Embedded, Safety
The 3rd Wave – Train Things!

1980s  Machine Code, Embedded, Safety

2010s  Interpreted, Connected, Secure

2020s  Machine Learning

Read more about our vision [https://blog.hackster.io/embedded-ml-for-all-developers-1f000ccdadd](https://blog.hackster.io/embedded-ml-for-all-developers-1f000ccdadd)
The TinyML Market

Example TinyML market opportunities

- Consumer: $252M (14.6%)
- Retail: $287M (16.6%)
- Logistics: $253M (14.6%)
- Industry & Energy: $618M (35.8%)
- Office & City: $317M (18.4%)

10M device developers with access to 30B micro-controllers shipped annually
Edge Impulse

Dataset
- Acquire valuable training data securely
- Enrich data and generate ML process

Edge Device
- Real sensors in real time
- Open source SDK
- Embedded or edge compute deployment options

Impulse
- Test impulse with real-time device data flows

Test

Sign up for the developer preview at [http://edgeimpulse.com](http://edgeimpulse.com)