Products
Services
Software
Platforms
Data Intelligence

AutonomousStuff
Solutions
www.AutonomouStuff.com
About AutonomouStuff

AutonomouStuff is the world’s leader in supplying components, engineering services, software and data intelligence to help enable autonomy. The team takes pride in cultivating industry-changing partnerships, working with cutting-edge technologies to ensure customer satisfaction. We take the time to research and implement the latest product technologies, helping customers remain at the forefront of these exciting and innovative markets.

AutonomouStuff’s vision

To provide the world’s innovative organizations with the best products, software, engineering services and data intelligence that enable robotics and autonomy. We call this **bringing together the world's best.**

AutonomouStuff’s culture

As we grow as a company, it has become more and more important to explicitly define the core values from which we develop our culture, our brand and our business strategies.

AutonomouStuff is full of passionate people who love what they do.
**Innovative Products**

**3D:** Scanning technologies that provide a real-time 3D representation of their surroundings, used for localization and object detection, tracking and classification.

**Actuation:** Mechanical components responsible for moving or controlling a physical system, usually used for vehicle control or robotics.

**By-wire controls:** Electronic actuation of vehicle-control systems.

**Computing:** Electronic devices for storing and processing data in applications such as data collection and retrieval, algorithm development and processing and deep learning.

**Data acquisition:** High-bandwidth interfaces and storage hardware used for gathering and retrieving large amounts of data.

**Data storage:** Storage systems designed for the massive amounts of data generated by autonomous vehicles.

**Enclosures:** Rugged and cosmetically appealing camera, LiDAR and RADAR enclosures built to withstand the most challenging environmental conditions are used for military, transport and industrial applications.

**GPS - IMU FOG:** Global positioning systems, inertial measurement units and fiber optic gyros used for globally localizing a moving platform and orienting that platform in free space with high precision.

**Interface tools:** Tools that make it easy to design user interface elements and update module tools, used to author apps and macros.

**Kits:** Ready-to-use perception, positioning and data storage kits for advanced safety and robotic research vehicles, used for automated research and development.

**LiDAR:** Laser measurement detection systems used for localization, 3D mapping, object detection, tracking and classification.

**Platforms:** Preconfigured or custom platforms for autonomous vehicle development.

**Power distribution:** Power management for the electrical systems in your vehicle.

**Tele-op:** Remote tele-operation for automated vehicles.

**RADAR:** Sensors that use electromagnetic waves to identify the range, altitude, direction or speed of both moving and fixed objects, used for applications such as Adaptive Cruise Control (ACC) and Blind Spot Monitoring (BSM).

**Software:** Support for highway and shuttle automation, LiDAR object processing and speed & steering control.

**Ultrasonic:** Sensors generating high-frequency sound waves and then evaluating the echo received by the sensor, often used in parking assistance applications.

**Vision:** Vision sensors that may include a single camera, a stereo pair and multiple cameras, used for object detection, tracking and classification, lane modeling and road sign detection.

**Wireless:** Radios, controllers and other wireless products that use electromagnetic waves to carry a signal over part or all of a communication path, often used for GPS RTK corrections, V2V, V2I or vehicle remote control.

www.AutonomouStuff.com/Products
Starting with a customizable R&D platform can accelerate your work on advanced driver assistance systems (ADAS), advanced algorithm development and automated driving initiatives—or help take your driverless efforts to the next level. Our expert engineers have developed platforms preconfigured with sensors and software based on customer needs. Or, if you prefer, create your own. Either way, we’ll help you pull together everything you need to get started on day one.
Automotive
Automobile platforms chosen for integration potential and designed for safety and reliability.

Class 8
A readily configurable and scalable class 8 solution, ready to customize.

NEV
Polaris GEM options for a scalable and customizable fully electric platform.

Off-road vehicles
Completely customizable platform of choice for off-road applications.

When you purchase a platform from AutonomouStuff, we're part of your team. A knowledgable and experienced project manager stays in touch with you on a regular basis to keep you current on platform updates and to make sure we're meeting your needs.
Additional services include: middleware implementation, configuration, calibration and training.
Superior Services

Integration services

Our application engineering experts are the world’s best at integrating hardware and software into vehicles used for automated driving research and other applications. Our integration experience spans a variety of industries both on and off customer sites.

Engineering services

Software applications and classification from AI based object data collection to fully driverless car technology help you take your project to the next level. We can help you develop the applications you need to run autonomous vehicles and devices.
Consulting

Whether you seek an expert workshop, technical industry analysis reports or other expert consulting, our staff brings decades of experience to the table from across a variety of different industries.

Value-added services

Our talented staff delivers a variety of hands-on training options for our software and technology. We have the ability to fully customize all the software we offer to ensure your specific needs are met.
Cutting-Edge Software

Highway automation
Control of speed, distance and positioning at highway speeds

LiDAR Object Processing
Segmentation and object tracking with 3D point cloud LiDAR data

Shuttle automation
Advanced control for autonomous shuttle operation

Speed & steering control
Programmable emulation of typical driving behavior

Our software development program, which has its roots in the DARPA challenges, is based on:

- Decades of robotics experiences
- Unique industry knowledge and perspective
- Understanding of Artificial Intelligence

- Expertise in control algorithms and perception sensing
- Extensive knowledge of middleware (ROS) for self-driving applications

- State-of-the-art programming methods, processes and quality control
- Bringing together our global partner ecosystem
AutomouStuff’s goal is to enable the future of transportation by significantly reducing development time of autonomy, driving our customers forward.
AutonomouStuff's Data Intelligence solutions focus on efficient ways of capturing, transferring, processing and archiving data generated from R&D vehicles. Data Intelligence is also centered around development of the software stack that controls the highly automated vehicle and the tools needed to enable the development of the stack. Tools consist of storage, annotation, machine learning model training and simulation.

**Data acquisition**
- Sensor integration
- Sensor calibration
- Sensor logging
- Image capture
- Storage

**Data classification & labeling**
- Manage data lifecycle
- Tagging/annotation
- Sensor truth
- Deep learning OD training
- Map creation

**Application development**
- Sub-system development
- Deep learning training
- Watchdog application
- Security
- Compliance

**Simulate, drive and test**
- Validation
- SIL/HIL full simulation
- Vehicle integration
- Deep learning inferencing
Data Intelligence ensures security, lowers cost and increases performance and efficiency.

With 10 years of in-house experience in autonomy and advanced driver-assistance systems, plus support from our expert partners, we can help you get up and running quickly. AutonomouStuff Data Intelligence solutions address common scenarios for ingesting, storing and archiving vast amounts of data from onboard sensors and systems.

<table>
<thead>
<tr>
<th>Data acquisition &amp; storage</th>
<th>Data classification &amp; labeling</th>
<th>Application development</th>
<th>Simulate, drive, &amp; test</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sensor integration</td>
<td>• Manage data lifecycle</td>
<td>• Sub-system development</td>
<td>• SIL/HIL full simulation</td>
</tr>
<tr>
<td>• Sensor calibration</td>
<td>• Tagging/annotation</td>
<td>• Deep learning OD inferencing</td>
<td>• Vehicle integration</td>
</tr>
<tr>
<td>• Sensor logging</td>
<td>• Sensor truth</td>
<td>• Watchdog application</td>
<td>• Validation</td>
</tr>
<tr>
<td>• Image capture</td>
<td>• Deep learning OD training</td>
<td>• Security</td>
<td></td>
</tr>
<tr>
<td>• Data collection</td>
<td>• Map creation</td>
<td>• Compliance</td>
<td></td>
</tr>
<tr>
<td>• Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>