NEUROMEM TRAINING
SURF THE 3RD WAVE OF AI

Genera Vision offers training classes about the NeuroMem® technology featuring formal presentations, demonstrations as well as hands-on exercises using the General Vision hardware and software tools.

Our standard 2-day training class can be extended with custom workshops focused at deploying your specific application(s). If you have less time, we can design custom workshops with shortened academic presentations and a specific application focus.

OBJECTIVES

- Understand the value proposition of the NeuroMem® technology to deploy **edge intelligence** in a practical way, with in-situ and on-the-go learning, high-speed recognition at ultra-low power.
- Understand the value proposition of NeuroMem® for **data analytics** from single or multiple sources including streaming and stored data derived from text and measurements, sensor and audio signals, images, and movies, and how it can reduce the contribution of GPUs and CPUs for pattern learning and classification problems.
- Understand the scope of applications from Factory 4.0, signal and vibration monitoring, target tracking, video surveillance for home and building automation, satellite imaging, biomedical and microscopic imaging.
- Understand the methodology and tools to design and deploy a NeuroMem Smart system, software and hardware considerations, the choice of a single or dual platform to handle the learning and the inference.

1) TECHNOLOGY INTRODUCTION

NeuroMem Decision space Mapping: Benefits of the unique combination of a life-long trainable RBF classifier and a natively parallel semiconductor architecture. Waives difficult compromises between simple and complex feature extractions, large training set versus learning latencies.

Single and Multiple classifiers: Classifying objects and events using multiple features makes it easier to distinguish between classes. Understand how a NeuroMem network can be trained using these different features and their responses used to make a robust decision.

Single and Multiple Experts: Designing applications using multiple experts trained at recognizing different families of objects or events eases the making of a rich and context-aware global decision. Understand how multiple NeuroMem networks can be assigned to different experts and run in sequence or parallel.

In-Situ Supervised and unsupervised learning: Understand how the automatic model generator embedded in each NeuroMem neuron can be used to learn models from user annotations, but also to register without supervision models which are significant and discriminant from one another.

Knowledge Building and traceability: Use generic or specific Knowledge Builder software tools to teach the NeuroMem neurons with training sets and qualify the knowledge they built on new testing sets. Understand your options and alternatives to improve the number of positive identifications, minimize false hits, make compromise between throughput and accuracy, etc.

2) ARCHITECTURE AND HARDWARE DESIGNS

NeuroMem inside: Understand how the NeuroMem neurons learn and recognize with a deterministic latency. Demystify the simplicity of the API to teach and query the neurons, detect, and handle novelties and uncertainties, save and transfer their knowledge.

Hardware and SOC designs: Whether you are designing a module for IoT, an HPC board or a specialty SOC, learn the simple common grounds to integrate a NeuroMem network with options to configure single or multiple expandable networks.

3) TIME SERIES

Overview: Methods, Demonstration and Practice with time series including vibration, biosensors, audio, etc.

CogniPat API: In depth presentation, demonstration, and practice with Arduino IDE. Optional practice with Python, C#, MatLab, LabVIEW.

NeuroMem Knowledge Builder: In depth presentation, demonstration, and cases studies on datasets (including your own).

4) IMAGE RECOGNITION

Overview: Methods, Demonstration and Practice with image and video files including part inspection, face recognition, target tracking, template matching, etc.

CogniSight API: In depth presentation, demonstration, and practice with Arduino IDE. Optional practice with Python, C#, MatLab, LabVIEW.

Image Knowledge Builder: In depth presentation, demonstration, and cases studies on images (including your own).

WHO SHOULD ATTEND?

- Business development managers who want to understand the value proposition of the NeuroMem technology
- OEM, System integrators seeking a competitive advantage for their line of products and services
- Software and hardware engineers who want to understand how to deploy applications and systems quickly and efficiently.

SCHEDULE, LOCATIONS AND PRICING

Standard classes are held at our facility in Petaluma, California on a regular basis.
Classes can also be organized at customer's facility on demand. Please contact us for additional information.

Standard 2 day class ....
     First Attendee $3,500
     Attendee #2 to #3 .... $2,000
     Attendee #4 and above...................... $1,500
Workshop session per attendee (1 day).......... $3,500
Travel expenses in case of on-site training ....TBD

Cost of attendance must be prepaid in full. Refundable at 50% if cancelled 2 days prior to the start of the training.