Uncode AI

Code-free Development, Delivery and Maintenance of Edge AI Applications

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VP, Research & Development

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The Edge AI Adoption Challenge

Difficult, costly & too complex to take models to production and build solutions

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Seamless hardware & software

The key to edge AI adoption

Today's largely manual deployment methods will be displaced by **AI supported knowledge-driven platforms.**

End to End Workload Processing

- Process AI and non-AI workloads on same chip
- End-to-end software development

Comprehensive AI Edge SW Platform

- Libraries/pre-built models
- Model Optimization
- Pruning/ Compression

Edge DevOps

- Model lifecycle
- Federated learning
- Containers

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What Slows AI Adoption Today

Barriers to AI adoption are still high

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Retail company wants to teach in-store cameras to detect potential buyers and provide real-time promotions to close sales.

Where do we get data to learn from?	How to code it without prior expertise?	How do we explain the results?	Does the high cost justify returns?
Training Data Quality and Shortage	Difficult UIs and Programming Languages	Lack of Explanation in AI	Significant Costs of Compute and Talent

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Empower Enterprises to Achieve Edge AI ROI

Bridge the Chasm between AI Research & Production AI Applications

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Blaize AI Solution

The power of Blaize software & hardware working together E2E effortlessly

How?

Automated and collaborative development
MLOps for Edge AI
Ease of use: code-free, intelligent user experience
Efficient hardware

"It only took me 3 weeks to develop a model. It's been 11 months, and we still haven't deployed it."

Dinesh Nirmal, IBM

"There is a huge gap hindering AI edge adoption, from end–to-end workload processing, lack of a comprehensive edge SW platform and edge devops"

Aditya Kaul, Omdia

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Comprehensive AI Applications

Productization for Edge AI Solutions

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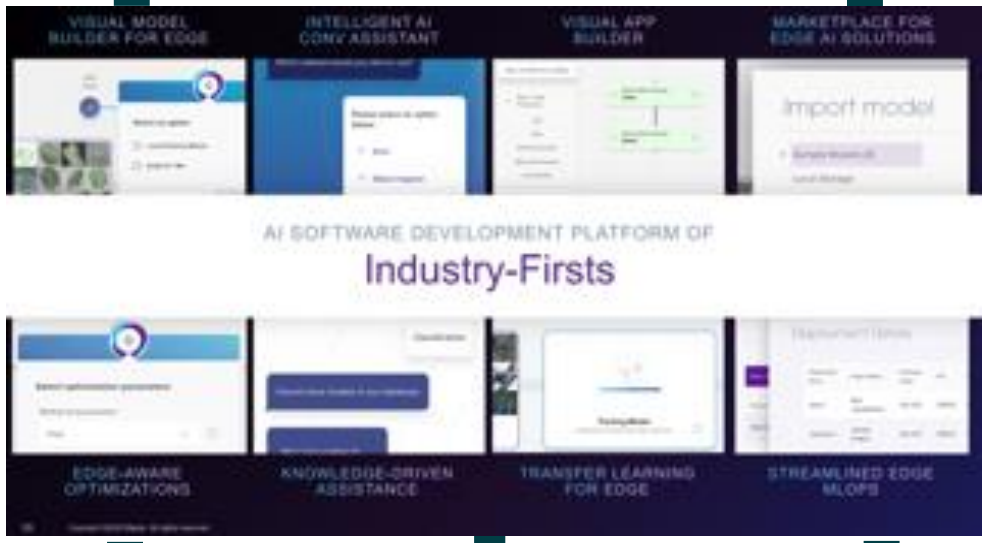
Build Edge AI apps in minutes not weeks

Unique Transfer Learning on Edge now even for Detection Use Cases

Bring training to Edge

AI Optimization techniques compress 98% of features with <2% of accuracy loss

Blaize AI Studio



Give customers freedom to use marketplaces or build from scratch

Harness know-hows from industry-first Edge AI Platform

Knowledge platform that supplements Data Scientist and ML Engineers

Remove complexity of setting and operating Edge AI Solutions

Configure, monitor and update deployed Edge AI systems via intelligent MLOps

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Uncode AI = Uncomplicate AI

From problem to production

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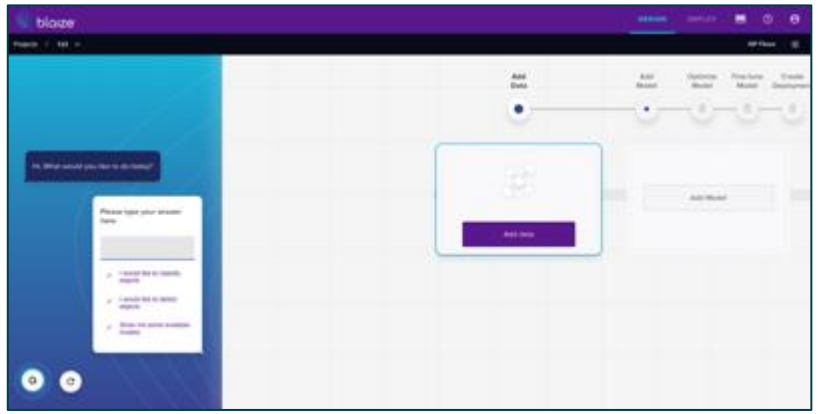
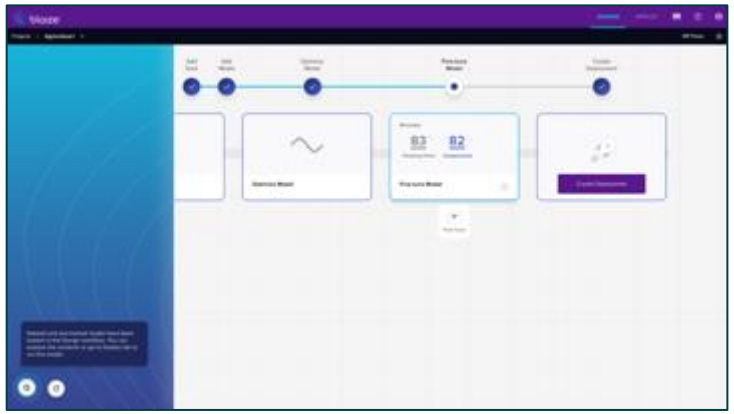
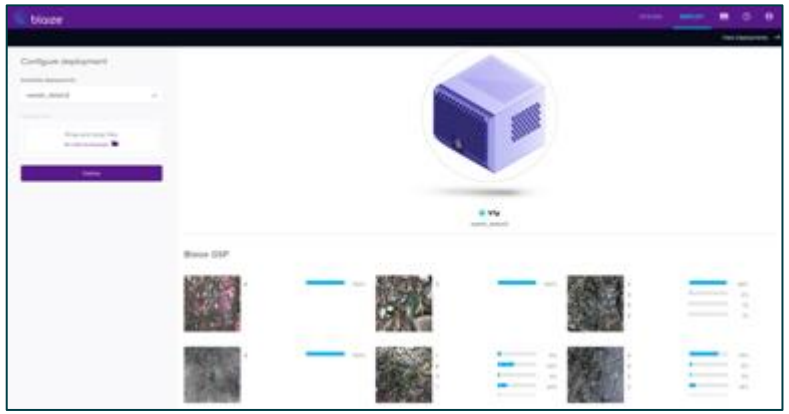
AI Studio

Prepare & Train ⟷ *Deploy & Manage* ⟷ *Use & Monitor*







GPU

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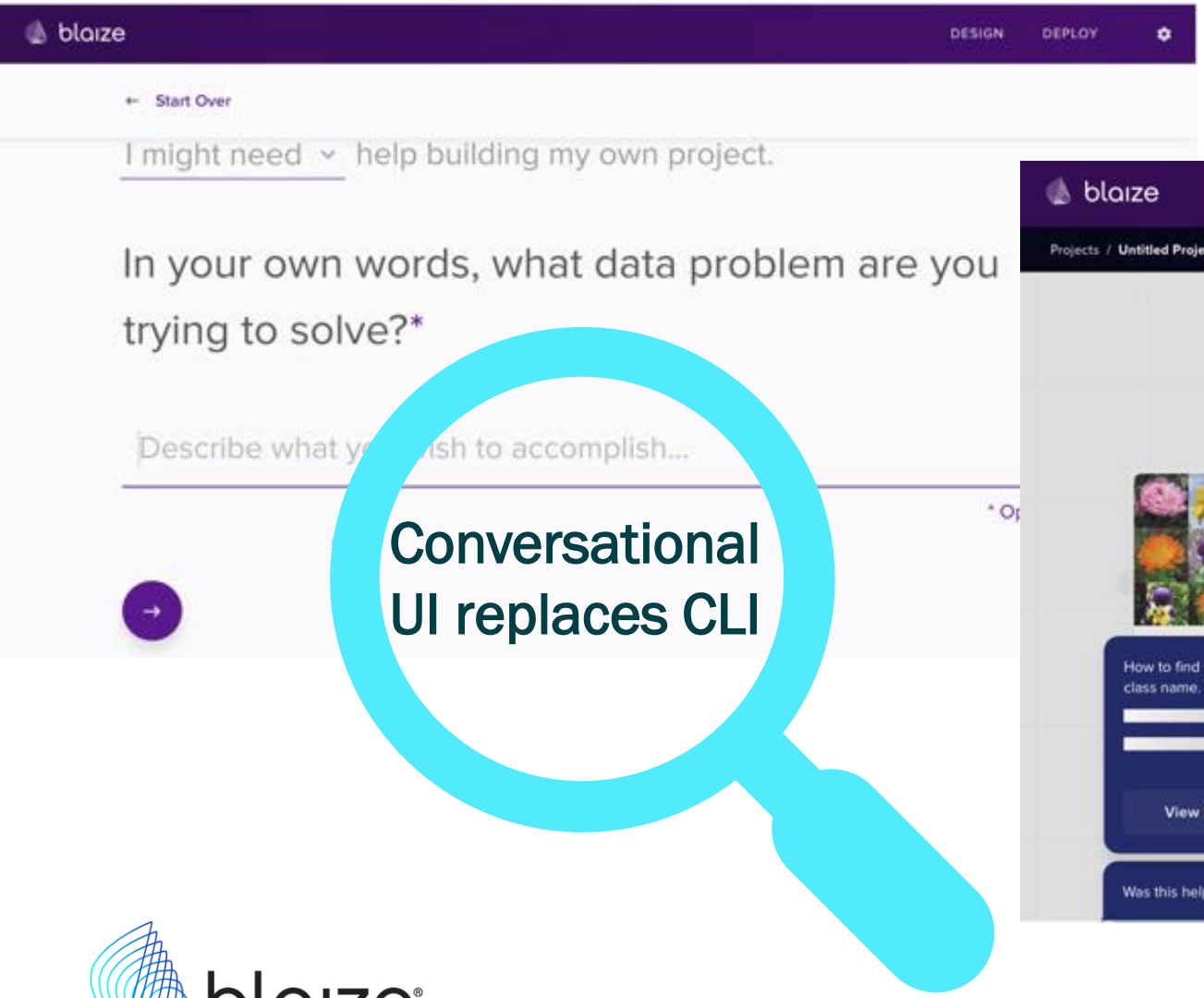
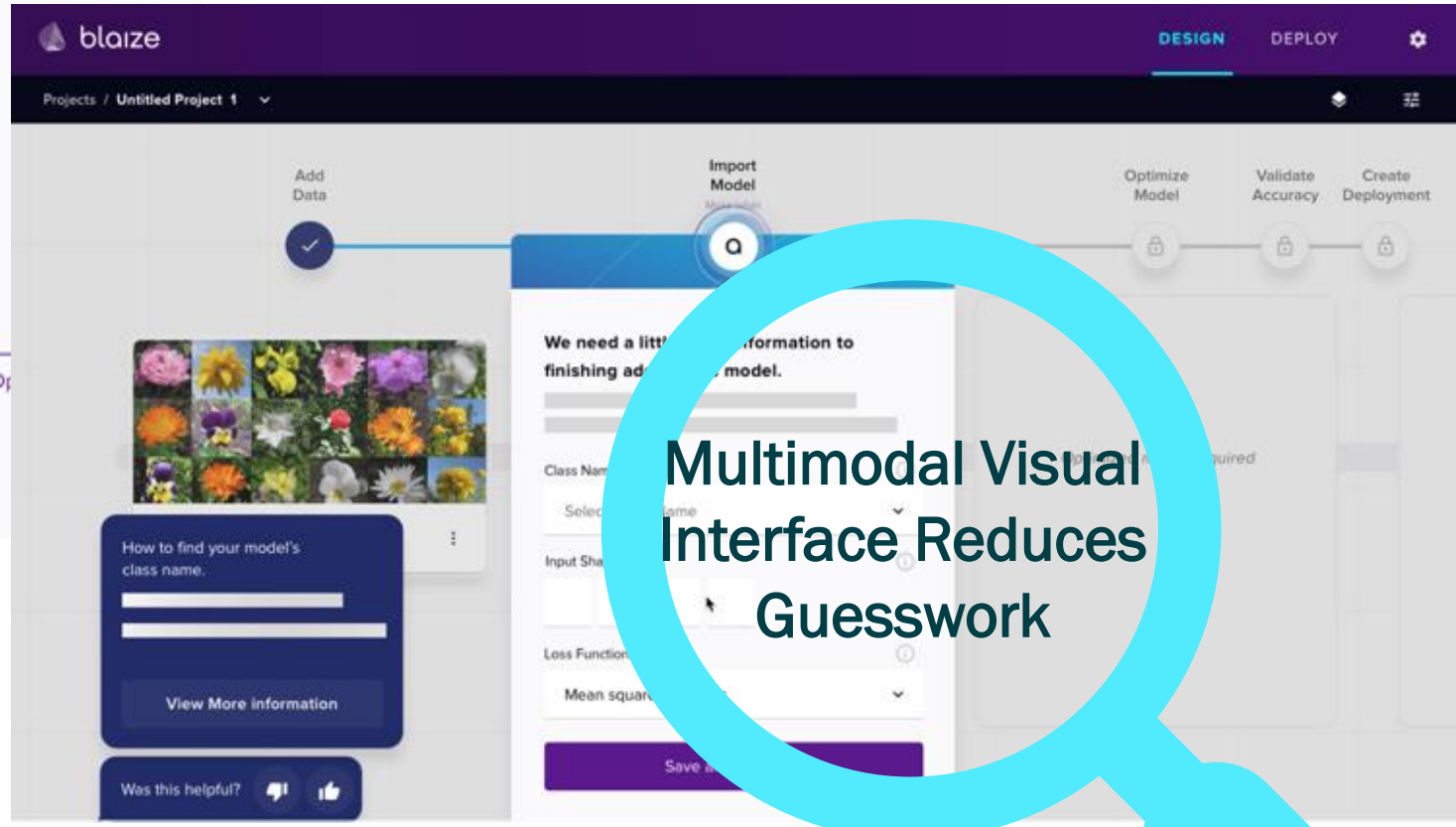
Command Over "Command Line"

Visual drag-and-drop and Conversational Interfaces





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Transform AI Development Process, Make it Easier

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Connect and Prepare Data	Find and Train Models	Compress and Optimize Models	Expand and Deploy AI Apps	Manage, Update AI Apps in Production
• Studio APIs • Studio data connectors • Studio Automated Data Annotator	• Code-free UI • Transparent Transfer Learning • AI-driven recommender • Marketplaces	• Automated compression techniques • Edge-aware optimizations algorithms	• Visually Add Advanced pre-processing and other workflows • Automatically generate deployment binaries/packages	• Edge-intelligent MLOps • Real-time management
Data Engineers	**Data Scientists**	**ML Engineers**	**SW Engineers**	**Platform Engineers**
Months > Days	Months > Days	Months > Days	Months > Weeks	Months > Weeks

AI Studio brings one team together to collaborate with SMEs

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Blaize AI Studio

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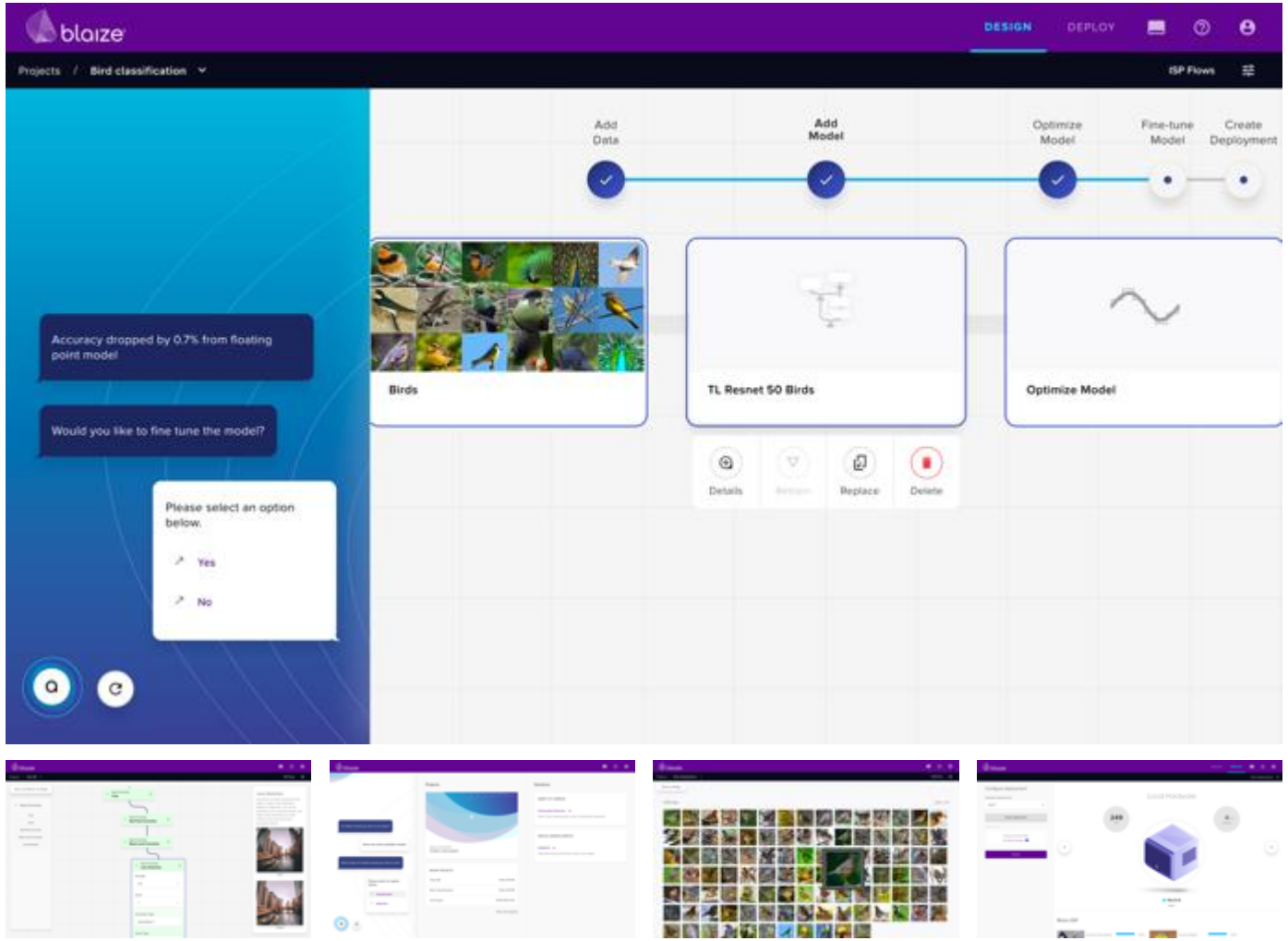
First **Open** AI Software Development Platform Spanning the entire Edge AI Application Lifecycle **Transparently**

Transform edge AI operational workflow from idea to development, deployment and management.



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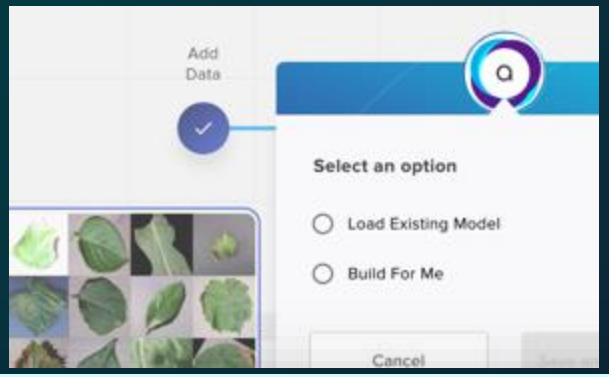
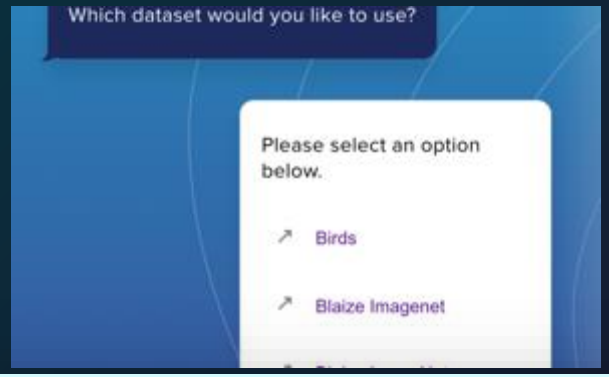
VISUAL MODEL BUILDER FOR EDGE

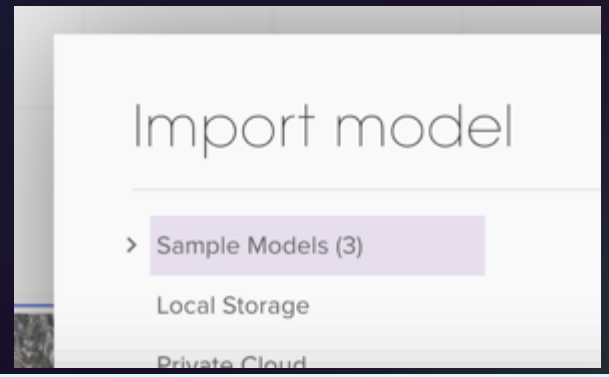


INTELLIGENT AI CONV ASSISTANT



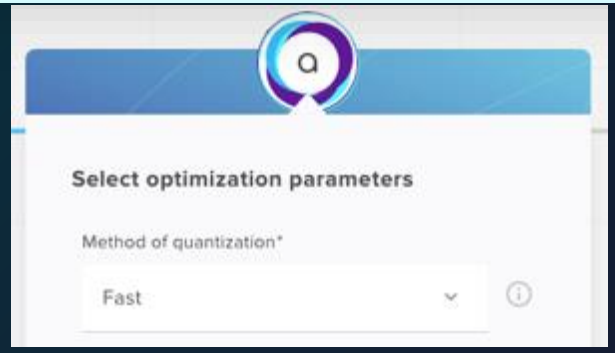
VISUAL APP BUILDER

MARKETPLACE FOR EDGE AI SOLUTIONS

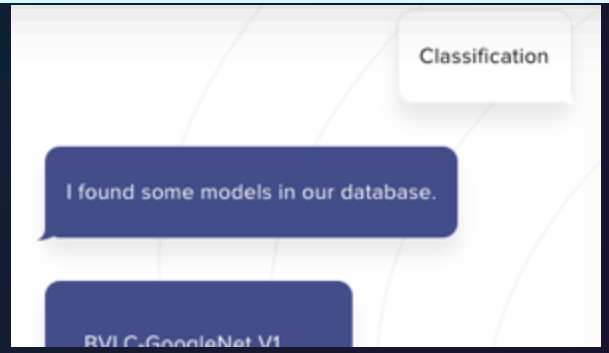


AI SOFTWARE DEVELOPMENT PLATFORM OF

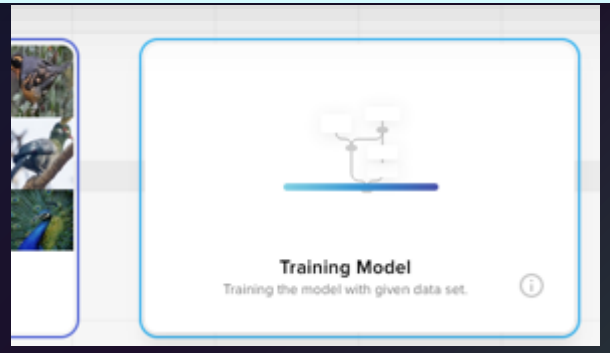
Industry-Firsts



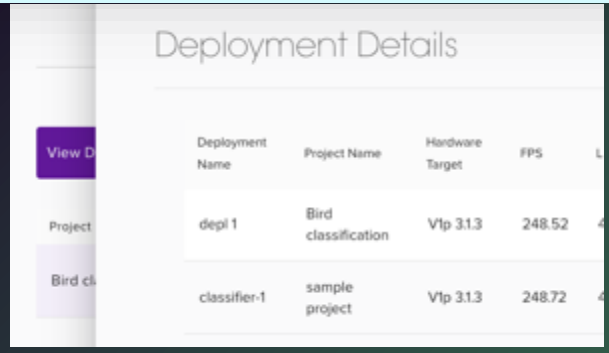
EDGE-AWARE OPTIMIZATIONS



KNOWLEDGE-DRIVEN ASSISTANCE



TRANSFER LEARNING FOR EDGE



STREAMLINED EDGE MLOPS

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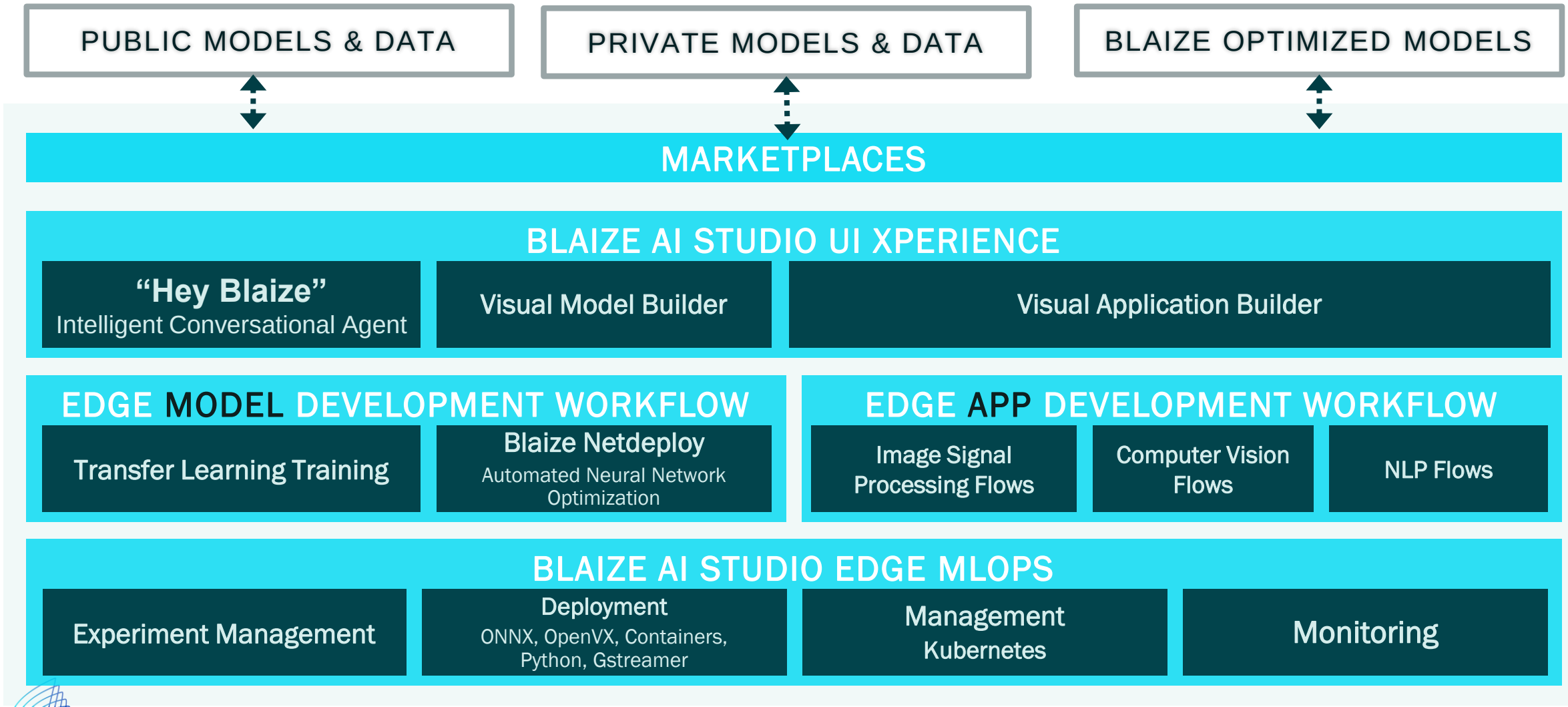
AI Studio Platform



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Models & Data: AI App & AI Templates Marketplaces

Embrace Transfer Learning to Build Trust in AI

Transfer Learning Enables Rapid AI Experimentation

Pre-trained models enables 60-70% of the solutions (Booz Allen Hamilton)

Models retrained with client specific data at the “last layer” saving time/ costs

Models you can visually inspect to trust

Open and freely distributed for easy adoption

Algorithms, ML frameworks, science packages, training courses, techniques

Custom high-quality synthetic training data

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Groundbreaking MLOps for Edge AI Apps

Complete Scalable Platform

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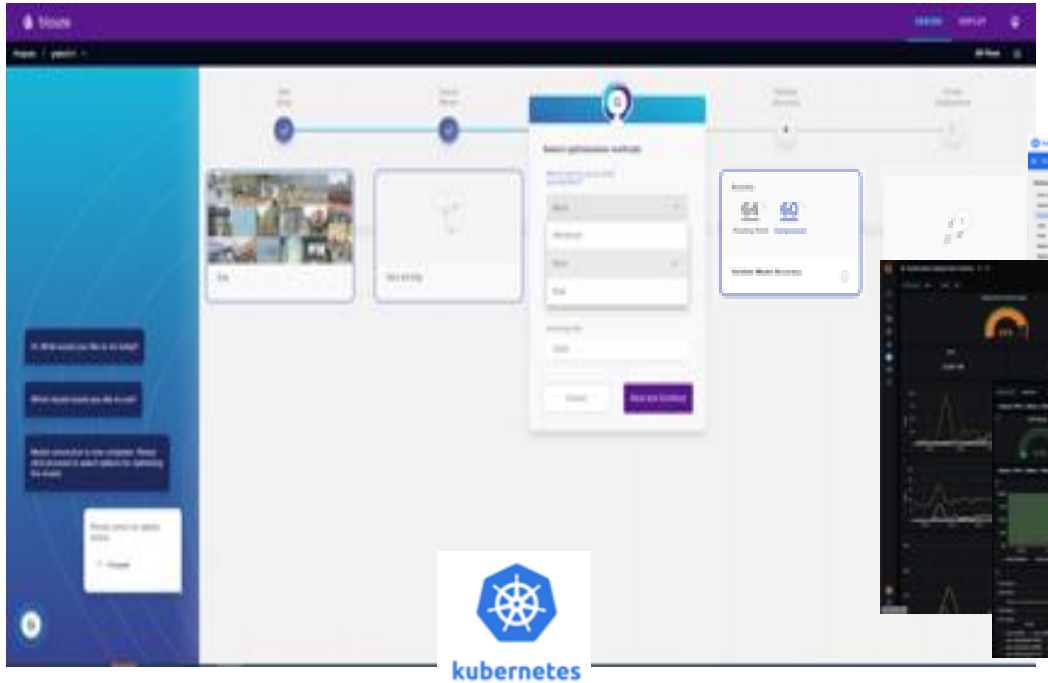
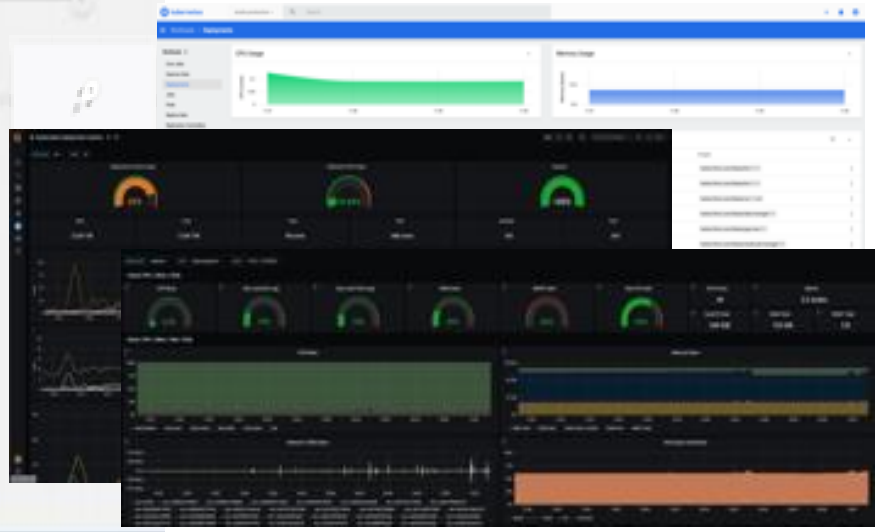
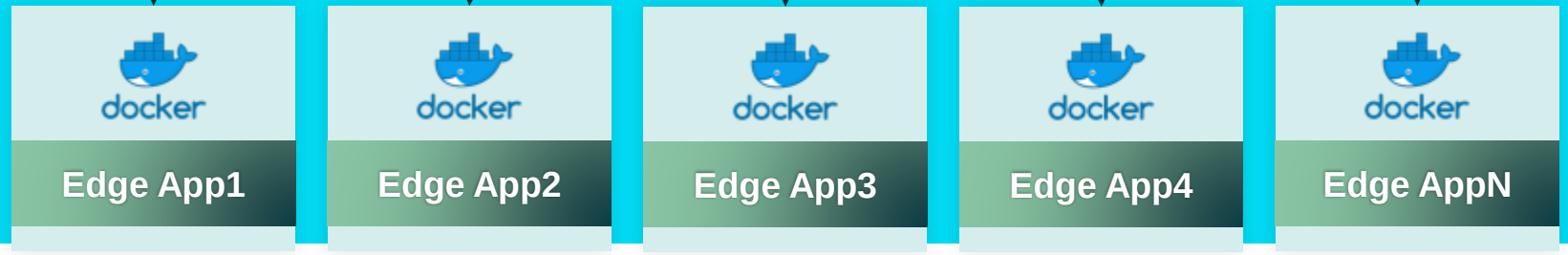
- Cloud & On-premises
- Microservices architecture of containers and Kubernetes
- Scalability, reliability, continuous updates
- Ease of application deployment and management globally



KUBERNETES MANAGEMENT TOOLS



Blaize Hardware



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Introduction to Blaize AI Studio DEMO

Unleash Your AI

Think it. Make it. Deploy it.

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- Reduce Application Deployment from Months to Days
  - Code-free Visual Interface: more productivity, more users, knowledge enablement
  - Open standards: user flexibility & broader adoption
  - Marketplaces collaboration: quick access to models, data & apps, knowledge enablement
  - Easy to use App Dev workflow: visually build complete edge AI models and production app
  - Groundbreaking edge MLOps/DevOps: deploy, manage, monitor & improve apps

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Adding Personal to AI Computer

Affordable but powerful compute to **train** + power efficient devices to **run**

PC Revolution

- Affordable processor
- Easy to use productivity software
- The birth of the internet

Mobile Revolution

- Natural UIs in your pocket
- Low-cost software for every problem in life
- Permanently connected to friends and family via social networks

Next Wave: Personal AI Computing

- AI Processors in affordable PCs and peripherals
- Keep private private
- Easy to use software to build AI Apps
- Pre-made, intuitive AI applications for every problem in life
- Self-customizable apps for your needs

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Personal AI System That 90% of Population Can Adopt & Use

Age of hyperpersonalization: From personal recommendations of playlists to building your own AI app

THE "MACINTOSH" OF AI

Models Marketplace
(ready-made solutions ecosystem)

AI Knowledge Platform
(best AI know-how at your fingertips)

Peer-to-Peer Help & Sharing
(help when and where you need it)

Easy to Use AI UX

Intuitive UX
(code-free, conversational user experience)

Personal AI Computer

Open-The-Box Ready
(one-click hardware and software setup)

Automated AI Scientist
(knowledge-driven contextual assistant)

Automated Discovery
(finds your AI artifacts everywhere)

On the Edge or in the Cloud
(anywhere you need)

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Democratization of AI

Strategy & Philosophy

Data	• Keep data controls with data owners as much as possible • Connect to the data vs. hog the data
Talent	• Make more people AI-savvy • Enable developers to become ML/AI developers
Adoption	• Provide complete E2E AI apps not just models • Spread AI technology
Blockchain	• Growing collective distributed datasets without privileged access for greater benefit • Train in encrypted facilities
Knowledge Management	• Operate with meta-data instead of data itself

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Resources

- Blaize product information https://www.blaize.com/products/
- Blaize AI Studio product information https://www.blaize.com/products/ai-studio/
- Blaize AI Edge Computing hardware products https://www.blaize.com/products/ai-edge-computing-platforms/
- Blaize resource center, demo videos and company videos https://www.blaize.com/resource-center/

Visit the Blaize Embedded Vision Summit Exhibition Kiosk to learn more about revolutionizing AI at the Edge.

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