AI IN
12 MINUTES
FOR FISHING

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MOTIVATION - WHY AI?

Sustainable fishing practices

Enhanced species identification

Predictive analytics for fish populations

Operational efficiency in fleets

Monitoring environmental impact

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INDUSTRY

Commercial Fishing Fleets
Aquaculture Farms
Seafood Processing
Fishery Management Organizations
Marine Conservation Efforts

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STRATEGIC TRENDS

AI for sustainable fishing

Precision aquaculture

Drone and satellite monitoring

AI in fish species identification

Predictive analytics for stock levels

Automation in seafood processing

IoT in fleet management

AI for marine conservation

Data-driven fishery regulations

AI in market and demand prediction

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WHY CHANGE?

Overfishing concerns
Ecosystem preservation
Economic sustainability
Regulatory compliance
Technological evolution

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LEADING THE CHANGE

Marine Instruments (Fishing vessel monitoring)

AquaBounty Technologies (Aquaculture technology)

Deep Trekker (Underwater drones)

BlueNalu (Cellular aquaculture)

Aquabyte (AI in aquaculture)

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DIGITAL TRANSFORMATION

Autonomous fishing drones

AI in fish population analysis

Satellite imagery for marine monitoring

Machine learning in species identification

IoT devices for fleet tracking

AI in seafood supply chain management

Robotic systems in fish processing

AI-driven environmental impact assessments

Predictive models for fishery management

AI in aquaculture feed optimization

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AI DISRUPTION

AI in detecting illegal fishing

Predictive analytics for optimal fishing times

ML in aquaculture health management

AI for precision fish farming

Satellite and drone monitoring for conservation

Automated sorting and grading of catch

AI in reducing bycatch

Data analytics for sustainable fishery practices

AI in seafood market forecasting

AI-driven compliance with fishing regulations

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GREAT EXAMPLES OF AI

AI for species recognition in SmartCatch

Underwater drones by Deep Trekker

Precision aquaculture by AquaBounty

AI in fish stock assessment by eFishery

Satellite monitoring for illegal fishing

AI in NOAA's fishery management

BlueNalu's cellular aquaculture

Aquabyte's AI in fish farming

AI-based ocean condition forecasting

Machine learning in seafood traceability

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ECOSYSTEM REQUIREMENTS

Access to accurate marine data

Collaboration between fishers, tech companies, and regulators

Investment in maritime AI technology

Skilled workforce in marine biology and AI

Sustainable fisheries policies and practices

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AI ▶▶ SUSTAINABILITY

Reduced overfishing with AI management

AI-driven efficient aquaculture practices

Minimized environmental impact

Sustainable seafood supply chains

Data-informed conservation strategies

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NEW RISKS - ETHICAL, LEGAL, SOCIAL

AI accuracy and reliability in marine environments

Data privacy in fishing operations

Potential job displacement

Dependence on technology for decision-making

Balancing economic and conservation goals

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AI MISUSE EXAMPLES

AI manipulation for illegal fishing

Misleading AI in seafood labeling

Unauthorized surveillance of marine areas

Biased AI in fishery management

Over-reliance on AI predictions

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THREE AI DILEMMAS

AI versus traditional knowledge in fishing?

Balancing AI efficiency with job impacts in fishing communities?

Ensuring equitable AI access among small-scale fishers?

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ORGANIZATIONAL REQUIREMENTS

Leadership in sustainable fishing practices

Investment in AI and marine technology

Collaboration across the fishing industry

Continuous training in AI and marine science

Strong focus on ethical and sustainable practices

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STEP BY STEP APPLICATION

Identify AI applications in fishing

Invest in relevant AI technology

Train personnel in AI and marine science

Implement AI tools in fishing operations

Regularly assess and update AI systems

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BEST PRACTICES

Start with pilot AI projects

Focus on sustainability and conservation

Engage stakeholders in AI initiatives

Continuous monitoring of AI impact

Adapt AI tools to local fishing conditions

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AI TOOLS & MODELS

Predictive models for fish populations

Neural networks for species identification

Machine learning in aquaculture management

AI algorithms for sustainable fishing

Data analytics models in seafood traceability

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USEFUL DIGITAL TWINS

Digital twins of marine ecosystems

Virtual models of aquaculture farms

AI simulations for fishery management

Digital replicas of fishing vessels

Virtual seafood market analysis systems

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COOL
NORWEGIAN CASES

eSmart Systems (AI in energy for aquaculture)
Bluegrove (Precision aquaculture)
CageEye (Aquaculture monitoring)
OptoScale (Fish biomass measurement)
WiSub (Wireless underwater communication)

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GLOBAL LEADERS

Norway (Advanced in aquaculture technology)

Japan (Leader in fishing technology)

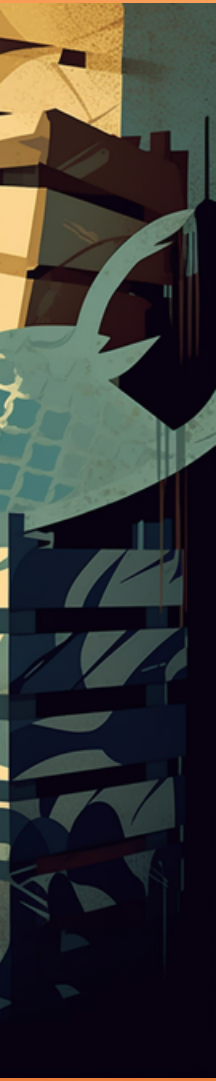**China (Largest global fishing industry)**

United States (Innovative marine conservation)

Chile (Major player in salmon farming)

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FUTURE JOBS

AI marine biologists

AI aquaculture system managers

Marine data analysts

Sustainable fisheries consultants

AI technology specialists in fishing

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THE FUTURE OF AI

AI for global fish stock sustainability

Advanced AI in precision aquaculture

AI in combating illegal fishing

AI-driven marine ecosystem management

Innovative AI fishing technologies

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RECOMMENDED READING

"Four Fish: The Future of the Last Wild Food" by Paul Greenberg

"The Outlaw Ocean" by Ian Urbina

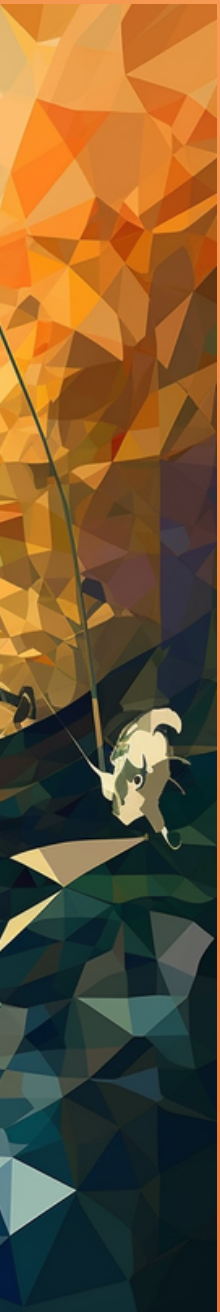"The Perfect Protein" by Andy Sharpless, Suzannah Evans

"Hooked: Pirates, Poaching, and the Perfect Fish" by G. Bruce Knecht

"Aquaculture: Farming Aquatic Animals and Plants" by John S. Lucas, Paul C. South

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GOOD TED TALKS

"The surprising way fish are good for the planet" by Mike Velings

"How we can protect our oceans from overfishing" by Ray Hilborn

"The fascinating secret lives of giant clams" by Mei Lin Neo

"Sustainable seafood? Let's get smart" by Paul Greenberg

"Innovating to zero in aquaculture" by Vidar Gundersen

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WHAT WOULD YOU ADD?
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