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## Skills

- **Frontend:** React, TypeScript, MUI, Zustand, React Query
- **Backend:** FastAPI, Node.js, Spring Boot, REST, GraphQL
- **Cloud & DevOps:** AWS (EKS, S3, Glue), Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins)
- **Data & Analytics:** Data Pipelines, ETL, Monitoring (Prometheus, Grafana)
- **Leadership:** Architecture, Mentoring, Technical Strategy

## AI ENGINEER / ARCHITECT — EXPLORATORY RESEARCH & PROTOTYPING

# Volodymyr Pasichnyk

Principal Software Engineer (FinTech · React · FastAPI · AWS · TypeScript)

I'm working on exploratory research at the intersection of voice interaction, AI-assisted systems, and human-centered workflows — focusing on how AI can support everyday work, thinking, and decision-making.

The work is research-driven: prototyping interaction patterns, testing workflow approaches, and identifying recurring patterns and anti-patterns in processes and system design.

The goal at this stage is clarity, not a finished product.

## Profile

Principal Software Engineer (FinTech · React · FastAPI · AWS · TypeScript) with 15+ years delivering secure, high-availability platforms.

In parallel, I run exploratory research and prototyping in voice and AI-assisted workflows: context handling in long-running tasks, voice → intent → action pipelines, and AI-supported structuring of discussions and decisions.

Currently exploratory (not publicly productized) — open to thoughtful early conversations.

## Current exploration

Exploratory research and prototyping focused on voice interaction, AI-assisted systems, and human-centered workflows.

- Voice-first interaction experiments
- Persistent context in long-running conversations/tasks
- Voice → intent → action prototypes
- Hybrid on-device + cloud speech processing
- Pattern / anti-pattern identification in workflows and architecture

## Education

- Ph.D. in Applied Math, 2005
- M.A. in Applied Math, 1997
- Dnipropetrovsk National University, Ukraine

## Long-term direction

Continue research-driven iteration on interaction patterns, context handling, and pragmatic system design for AI-assisted workflows.

- Voice-first interaction experiments
- Persistent context in long-running conversations/tasks
- Voice → intent → action prototypes
- Hybrid on-device + cloud speech processing
- Pattern / anti-pattern identification in workflows and architecture

## Architecture Overview

### Voice Interaction Layer

- Hybrid on-device + cloud processing for low latency and privacy.
- Speech-to-text pipelines designed to handle accents and noise.
- Voice-first UX patterns focused on clarity and low friction.

### Context & Memory Layer

- Captures recurring signals: routines, projects, people, and preferences.
- Supports long-running tasks with durable state and traceability.
- Privacy-first design with explicit consent for external data flows.

### Orchestration & Policy Layer

- Policies and safety rails for tool-use, escalation, and failure handling.
- Orchestrates intent → action pipelines via tools and APIs.
- Human-in-the-loop patterns where appropriate.

### Location & Environment Layer

- Optional location signals for context in tasks and routines.
- Time + place-aware policies for relevance and safety.
- Experiments with spatio-temporal patterns to support decisions.

## Skills & Focus Areas

### AI, Agents & Voice

Speech processing pipelines (STT/TTS), VAD; hybrid on-device + cloud inference; LLM orchestration and tool-use patterns; context handling in long-running tasks and workflows.

### Frontend & Interaction

React, TypeScript, @mui/material, Zustand, React Query; high performance data-heavy UIs, virtualized lists, complex dashboards; assistant UX and ambient interfaces.

### Backend, Cloud & Data

FastAPI, Node.js, REST, GraphQL, proxy services; AWS (Lambda, API Gateway, S3, CloudFront, CloudWatch, EKS); data pipelines, ETL, telemetry, observability.

### Leadership & Product

Architecture strategy, mentoring, code review culture, cross-team alignment; translating fintech, automotive, and AI domains into product experiences with PMs, designers, and quants.

## Experience

### Principal Software Developer

**Luxoft UK** | Apr 2024 – Present , London, United Kingdom

*Internal transition within Luxoft, continuing work with a top-tier \$2T+ asset manager on a new risk and volatility analytics initiative.*

- Led architecture and delivery of a portfolio risk and volatility analytics UI used by portfolio managers and risk teams.
- Built modular workflows with **React**, **TypeScript**, and **@mui/material** to surface complex financial metrics with clarity and performance.
- Integrated **FastAPI** services and analytics pipelines to deliver responsive, real-time visualizations.
- Partnered with product, quant, and data teams to turn risk models into interactive decision-support tools.
- Introduced performance profiling, observability, and UI standards for a suite of analytical dashboards.
- Mentored globally distributed engineers; aligned architecture patterns across multiple applications.

**Tech:** React, TypeScript, @mui/material, FastAPI, AWS, analytics pipelines, observability.

## Lead Software Developer

**Luxoft USA** | Oct 2021 – Mar 2024 , Los Angeles, California, US

*Internal transfer within Luxoft global engineering organization.*

- Modernised a decision-support and communication platform for portfolio managers and investment committees.
- Elevated UI/UX and frontend architecture with React, TypeScript, Cypress, and @mui/material.
- Collaborated with Java services and AWS Lambda to deliver real-time portfolio insights and automated reporting.
- Codified design systems, performance monitoring, and CI/CD practices for predictable releases.
- Translated investment and compliance requirements into scalable, data-driven workflows.

**Tech:** React, TypeScript, Cypress, @mui/material, Java services, AWS Lambda, CI/CD, design systems.

## Senior Software Developer

**Luxoft GmbH** | Oct 2018 – Sep 2021 , Munich, Germany

*Member of Luxoft's automotive and data analytics division, working with global OEMs such as BMW, Renault-Nissan, and Continental.*

- Built telemetry and analytics tools for connected vehicles, enabling data-driven R&D decisions.
- Contributed to AI perception systems for road-scene recognition across diverse conditions.
- Delivered cloud data pipelines on AWS and GCP for large-scale telemetry ingestion and visualization.
- Created internal tools for data labeling and model evaluation to accelerate perception research.
- Collaborated on architecture, data governance, and automated QA to keep releases predictable.
- Implemented CI/CD with GitHub Actions and Jenkins; mentored engineers on modern cloud practices.

**Tech:** AWS, GCP, telemetry pipelines, AI perception, GitHub Actions, Jenkins, data governance.

## Earlier Experience

Consultant & Software Engineer across Europe and the US, delivering full-stack and cloud-based enterprise applications.

- External consultant for **Cisco Systems**, building a cloud deployment management platform that automated provisioning, monitoring, and orchestration.
- Delivered scalable web solutions and data integration workflows in **e-commerce**, **pharmaceutical**, and **digital publishing**.
- Built full-stack systems with **JavaScript**, **.NET**, and **SQL**, focusing on enterprise integration and workflow automation.

Gained experience in distributed delivery, cross-domain system design, and direct client collaboration.

## Downloads

- [Download Research / Exploration CV \(PDF\)](#)
- [Download Principal Engineer CV — FinTech Platforms \(PDF\)](#)

Update file names and paths as needed in your build.

## Highlights

- Exploratory research in voice + AI-assisted workflows (prototypes, patterns, context handling)
- 15+ years shipping data-driven platforms in fintech/automotive/enterprise
- High-performance React/TypeScript UIs + FastAPI/AWS services, observability, CI/CD
- Architecture, mentoring, cross-team alignment