A defense of computer-assisted proofs from the mathematical practice

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Topic: Philosophy of Science and Mathematics in the Era of Computing Machinery
Keywords: Computer-assisted proofs, automated proof., mathematical understanding, philosophy of mathematical practice

This talk is about the epistemic value of computer-assisted proofs (CAPs), based on the case of the automated resolution of Robbins' problem using the EQP system in 1996. A major objection to this type of proof is that, as they are leibnizian style proofs (Hacking, 2014) and operante on a formal level, they do not offer mathematical understanding, since their inferences, although valid, are inaccessible to direct human inspection.
However, the above criticism loses force when approached from a philosophy of mathematical practice. According to Avigad (2008), understanding a proof does not involve going through each of its inferential steps, but rather deploying active epistemic competence: identifying assumptions, reformulating it, extending it, and evaluating it critically. For his part, Robinson (2000) argues that the explanatory component of a proof does not come from its formal structure, but from its ability to cognitively transform the agent, which he calls cognitive performativity.
From this perspective, CAPs can facilitate understanding when they are integrated into practices where the user can manipulate, analyze, and apply them in broader contexts. The case of Robbins' Algebras illustrates how an automated proof, although opaque with respect to its internal processes, allows formal dependencies to be constructed and results to be extended, thus manifesting a form of situated understanding. That is why, far from hindering understanding, CAPs can be seen as active epistemic instruments for contemporary practice.

A game for feasible classical propositional reasoning

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Topic: Theory of Computation, Formal Languages, Logic, and Foundational Mathematics
Keywords: classical propositional logic, depth-bounded reasoning, game semantics, tractability

We put forward a game semantics for the "weak depth-bounded" tractable approximations to classical propositional logic introduced by Marcello D'Agostino and co-authors. Our semantics models an agent's computational or cognitive resource consumption in terms of the expense of questions out of a budget within a win-lose two-player game of perfect information. Increasingly better players can intuitively be associated with increasingly stronger approximations. Furthermore, the game can be adapted so as to approximate non-classical reasoning.

A holistic approach to ethical evaluation and transparency at every stage of artificial intelligence development

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Topic: Ethical Issues in and of Computing
Keywords: Epistemology, artificial intelligence, data bias., ethical framework

The separation of ethical and epistemic considerations in the evaluation of artificial intelligence has led to significant shortcomings in addressing issues of bias, opacity, and accountability on the part of the companies that fund them.

The essay addressed the vision proposed by Russo in Connecting ethics and epistemology of AI. In the first section, it reconstructed his argument to show that his proposal opens up the landscape for new questions about the possibility of integrating an ethical framework into epistemic evaluation methods in AI development. In addition, the discussion addresses the extent to which a robust ethical and epistemic evaluation framework can contribute to trust in artificial intelligence. Based on a review of the vision of Russo et al. (2023), in the second section I show that their proposal does not indicate a clear ethical framework that can be used when designing, programming, and implementing AI. Along with this, I addressed as an example the problem of implementing a prediction system without a clear epistemic-ethical framework in the US criminal justice system. In the third section, I discuss the possibility of complementing the authors' proposal with a deontological ethical framework for artificial intelligence. Finally, in section four, I review the limitations of the complete epistemological ethical framework, using the example proposed above, together with a conclusion to the debate.

The impact of the use of AI in government agencies for justice is a worrying situation because: AI needs an epistemological and ethical framework that guarantees transparency from its modelling to its use. Therefore, this paper addresses the limitations of Russo et al.'s (2023) proposed ethical-epistemological framework for its implementation. Beyond suggesting a complete ethical framework, I focus on highlighting the problem of having an incomplete framework for specific cases: the use of AI in the US criminal code.

A Modular and Composable Approach to Algebraic Effects in Systems Programming

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Topic: Philosophy of Computing and Computer Science
Keywords: Rust, algebraic effects, effect handlers, modularity, safety, systems programming

Algebraic effects and handlers are a powerful abstraction for structuring programs by separating effectful computations from their interpretation. In systems programming languages, such as Rust, their adoption has been limited by challenges in safety, efficiency, and modularity. This work presents a library-based approach to algebraic effects in Rust, leveraging ownership, borrowing, and traits to provide a safe, efficient, and composable framework for effectful programming. Effects are modeled as traits ("abilities"), and handlers as trait implementations, enabling modular composition. The core monad encapsulates effectful computations, with combinators and procedural macros for ergonomic sequencing. Our implementation is entirely library-based, incurs minimal runtime overhead, and requires no compiler changes. We demonstrate applications in state management, error handling, and dependency injection. This approach shows that algebraic effects can be practical and powerful for systems programming, opening new possibilities for modular and safe code in Rust and similar languages.

A Pragmatic Defence of the Physical Church-Turing Thesis

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Agent-relative computability, Computational realism, Finite agents, Hypercomputation, Implementation, Individuation of computation, Operationalism, Physical Church–Turing Thesis, Symbolic control, Thermodynamic constraints

I defend a pragmatic reinterpretation of the Physical Church–Turing Thesis (PCTT), arguing that computability should be understood not as an intrinsic property of physical systems, but as a constraint on what finite agents can operationally stabilise and exploit. Existing approaches to physical computation typically treat any state-transition system as a potential computer, provided a structure-preserving mapping can be drawn from physical states to abstract symbols. But this confuses the act of embedding a computational model within a physical model with the presence of computational power in the physical system itself. A computational description is only adequate if it does more than redescribe the dynamics. Indeed, the salient point is that without a finite agent to construct, maintain, or verify the mapping, the system computes nothing—in any operationally meaningful sense.

By foregrounding the agent-relative nature of computation, I argue that the real boundary captured by the PCTT is practical, not metaphysical. Computation arises only when physical mechanisms are diachronically stabilised as symbol-like states under conditions that allow finite agents to control and reuse them. This requires energy, memory, noise suppression, and representational conventions—resources that hypercomputational proposals systematically ignore. Such models posit precision and stability that no agent can implement or verify, and thus fall outside the domain of physical computability in this operational sense.

This operationalist view reframes the PCTT as a structural consequence of finitude: the asymptotic boundary of what can be constructed and sustained by embedded agents in a noisy world. Rather than undermining the PCTT, this relativisation reinforces its significance by linking it to real-world thermodynamic and epistemic constraints. Computation, like thermodynamic work, is defined not by formal possibilities but by practical controllability.

A Trustless Decentralized AI Schema Based On Zero-Knowledge Proofs

Authors:

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Topic: Frontier Artificial Intelligence, Neurocomputation, and Computational Linguistics

Keywords: AI Governance, Blockchain, Cryptography, Decentralized AI, Ethereum ZKSync, Philosophy of Technology, Trustless Systems, Zero-Knowledge Proofs

In this paper, we propose a theoretical schema that illustrates how an architecture similar to ledger protocols such as Ethereum, Bitcoin, and ZKSync could be used to build a trustless decentralized AI network using Zero-Knowledge Proofs (ZKPs). We begin by critically assessing the dominance of centralized AI platforms like OpenAI and highlighting the epistemic and governance challenges they pose. In response, we investigate how the principles underlying trustless cryptocurrency systems align with the philosophical and practical demands of decentralized AI. We then examine decentralized compute models like the Ethereum Virtual Machine (EVM), noting their redundancy-related inefficiencies. To address these, we explore advancements such as ZKSync, which leverages ZKPs to enable scalable and verifiable decentralized computation. Building on this foundation, we propose a schema for a decentralized AI framework that incorporates zkLLM, a recently introduced ZKP method for verifying Large Language Model (LLM) computations. We conclude by analyzing the incentive structure of such a network and the possible emergence of an unstoppable AI.

Abstractions and representations in software construction

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Topic: Philosophy of Computing and Computer Science
Keywords: abstractions in software, computational thinking, problem solving process

Nowadays,there are a lot of software development methodologies and technologies that help guide the programmer in the development process, allowing the related tasks to be done easier. However, solving a problem and representing a possible solution as code in a programming language is a mental effort - not a mechanical action- that involves, both, knowledge of how the problem could be solved, and a method or technique to convert the solution to algorithms to be programmed and run in a computing device.

The latter action can be seen as a language translation, the main difference being that the target language of the solution has more rigorous rules than the source language.

Thus, an abstraction from the original solution written in natural language to an algorithm representation implies a simplification because the building of an algorithm has previously established rules, similar to how a programmer develops code from an algorithm, since a programming language is more restrictive than algorithms.

Nonetheless, if the solution is very complex, building an algorithmic representation does not follow a straightforward path. For this reason, my approach is to include other representations between the problem solution in natural language and the algorithmic representation to make the process easier with successive representations at different levels of abstraction.

This topic opens a discussion about how we can define levels of abstraction and how this could be useful to define the concept of *complexity* applied to the process of problem solving.

AI and Society

Authors:
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Topic: Computational Philosophy
Keywords: AI, cognitive processes, creativity

In a constantly changing world, the integration of tecnology and society has become increasingly evident and inevitable. The unprecedented generation of data has driven the implementation of artificial intelligence in different areas of our lives, from industry and research to education and more. As a result, AI is becoming more than just a tool; it's becoming an increasingly essential component.

However, as this integration progresses, different questions and concerns arise, such as: "Will AI eliminate job opportunities?" and "Does the use of generative AI affect our cognitive processes and creativity?"

This paper seeks to explore and analyze these issues, as well as their ethical and existential implications for a society increasingly immersed in technology.

AI as Acceleration of Ontological Reduction: From Technofeudalism to Dystopian Transhumanism

Authors:
Sergio Luna, UNAM

Topic: Gender, Politics, and Society in Computing
Keywords: Accelerationism, Algorithmic Governance, Artificial Intelligence (AI), Computational Capitalism, Digital Reductionism, Epistemology and Computation, Ontological Assumptions of the Human, Posthumanism, Technofeudalism, Transhumanism

In recent years, artificial intelligence has been heralded as a revolutionary step in human progress. However, this paper argues the opposite: AI has become the ultimate tool for accelerating the most alienating and oppressive structures already embedded within techno feudalist society. Using ideas from the philosophy of computer science, critical theory, and the legacy of accelerationism, this work proposes that AI functions not as a liberatory transhumanist project, but as a dystopian amplifier of inherited ontological assumptions about "human nature." These assumptions, which are rooted in colonial epistemologies, mechanistic reductionism, and an aristocratic tradition of academia, are embedded in the very architectures of computational systems.

The rise of AI within this context demonstrates how new technologies reinforce old hierarchies. Unlike earlier technological overhypes (i.e., quantum computing, NFTs), AI's accessibility gives users the illusion of participation in the technocracy, masking the deeper logic of extraction and control. This paper explores how algorithmic reasoning inherits a view of the human as predictable, quantifiable, and network-traceable as seen in surveillance capitalism patents. Through this lens, AI becomes not a neutral tool, but an agent of epistemological closure and ontological flattening.

Ultimately, here, it is argued that the philosophy of computer science must critically address how computation, in particular AI, reshapes what it means to know, to govern, and to be human. This paper offers a framework for understanding AI as a philosophical event: not because of its intelligence, but because of how it operationalizes and accelerates the dominant ideologies of our time.

Algorithmic Aesthetics: How Artificial Intelligence Shapes Normative Taste in Digital Environments

Authors:
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Topic: Aesthetic Issues in and of Computing
Keywords: Algorithmic Aesthetics, Artificial Intelligence, Artificial Subjectivity, Digital Visual Culture, Platform Ethics, Recommendation Systems

This paper explores how artificial intelligence, through algorithmic recommendation systems on social media platforms, not only organizes but actively shapes aesthetic norms in contemporary digital environments. Far from being neutral filters, these algorithms curate our exposure to visual content, influencing taste, desire, and cultural legitimacy. By privileging specific styles, bodies, and visual trends, and rendering others invisible, algorithmic systems establish normative standards that govern what is seen, valued, and emulated.

Drawing on interdisciplinary perspectives from aesthetics, media theory, and digital ethics, the paper argues that social media users are increasingly configured as aesthetic subjects through continuous engagement with algorithmically curated feeds. This process results in the homogenization of desire, the illusion of aesthetic diversity, and the gradual erosion of pluralism in visual culture.

The work calls for a critical reevaluation of aesthetic autonomy in computational contexts and proposes the need for alternative curatorial models that resist the logic of optimization. Ultimately, the paper aims to initiate a philosophical conversation about the ethical responsibilities of digital platforms in shaping cultural sensibilities and the role of AI in the construction of normative taste.

Algorithmic Forgetting

Authors:
Jesus Armando Tapia Gallegos, Self

Topic: Ethical Issues in and of Computing
Keywords: AI and Human Rights, Algorithmic Forgetting, Ethical AI, Machine Unlearning, Privacy-Preserving AI, Right to Be Forgotten (RTBF), Value-Sensitive Design

The ongoing evolution of artificial intelligence (AI) presents both unprecedented opportunities and profound ethical challenges for organizations navigating digital transformation. This study examines the intersection of transformational and agile leadership with responsible AI implementation in hybrid and remote work environments. Drawing from empirical insights and current the

Artificial intelligence systems have become central to how memory and identity are stored, processed, and retrieved in the digital age. Yet their persistent nature challenges fundamental rights, particularly the Right to Be Forgotten (RTBF). While legally recognized in several jurisdictions, including the European Union, the implementation of RTBF within AI infrastructures remains unresolved both technically and ethically.

This proposal introduces a conceptual and technical framework for algorithmic forgetting, offering design pathways for building AI systems that can respect RTBF without compromising model integrity or transparency. It explores recent advances in machine unlearning, targeted obfuscation, and regulatory modeling, while engaging deeper philosophical questions: What does it mean for a machine to “forget”? Who decides what should be forgotten, and under what ethical logic?

Rather than treat forgetting as an anomaly to be patched, this approach repositions it as a normative value, to be designed into AI from the ground up. This argues that effective RTBF implementation must blend legal compliance, ethical foresight, and computational innovation—requiring active collaboration across disciplines.

The contribution is both timely and original, speaking directly to the ethical design of intelligent systems in a world where remembering everything is no longer neutral, but potentially harmful.

Algorithmic justice and emotions in socio-digital networks

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Algorithmic justice; Emotion; Intersubjetivity; Communication; Socio-digital; Networks; Ethic.

Socio-digital communication technologies and platforms are currently agents of construction and intersubjective, social, cultural, economic and political change.

However, socio-digital technologies and the use of increasingly refined algorithms as opaque contribute to the transformation of interpersonal and intersubjective human relations, as well as to the perception of the world and the subject itself (Vinck, 2018; Antolinos, 2019; Balladares, 2023; García & Bailey, 2021). In this sense, the New Digital Pact (UNESCO, 2024), promotes a human-centered interaction, highlighting the axiological as the basis of an ethics regulating all digital communication.

The present research aims to consider socio-digital networks and artificial intelligences linked to communications, from a personalistic perspective and under a philosophical ethical approach. It is considered that technologies should be at the service of human beings and should always contribute to social improvement and well-being. The human being must administer and regulate technologies under certain ethical parameters such as the principle of justice, beneficence and not malefficiency; the principle of autonomy, the principle of human supervision or governance of autonomy and the principle of explainability and transparency.

An antagonist for AI: presenting the need to cultivate an alternative way of encoding meaning

Authors:
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Topic: Gender, Politics, and Society in Computing
Keywords: IA antagonist, Touch language, classification stories, communication ecosystem, words' engine

The objective of this paper is to present the need to cultivate an alternative way of encoding meaning other than through AI driven systems. The multiplication of digital devices and applications (aiming to maximize user interactions that produce data from which behavioral patterns can be discovered) has become more than a disturbing continuous noise in our living. The way we live has been transformed into a way of living that can be measured and sensed continuously by digital systems. We are tricked or forced into continuously feeding these systems with the large amounts of data they need, modifying our behavior to transpire our data in a convenient format for the system. Intelligence is a term that isolated us from the rest of the animal kingdom. Artificial intelligence empowered devices are also isolating us: they render obsolete the gaining of knowledge through how our body experiences the world.

What if we close our eyes and ears to shut down the digital devices that surround us, liberate our hands from them and communicate with one person at a time, in a language based on touching each other's body? Let our lives be modified by such a language.

Through this paper I study the body's relation to meaning, words' engine potential, intelligence's relation to words, intelligence's antagonists, the power of classification stories and touch as a language meant for the living. At last I conclude by speculating how cultivating a language based on touching bodies can bring balance into our communication ecosystem.

Apuntes para una Filosofía Política de la Inteligencia Artificial

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Topic: Philosophy of Computing and Computer Science
Keywords: Decolonialidad, Filosofía Política, Filosofía de la ciencia y la tecnología, Inteligencia Artificial

Hoy en día la Inteligencia Artificial (IA) ha cobrado gran relevancia, al menos mediáticamente, entre otras cosas gracias al empuje que las herramientas generativas le ha dado. Resurgen también preocupaciones por las distintas problemáticas implicadas por su desarrollo y uso. La reflexión filosófico-política ocasionado por la IA, abordan cuestiones como: poder, gobierno, libertad, manipulación, explotación, esclavitud, justicia, racismo, sexismo. El análisis de la IA respecto de ciertos temas de la Filosofía Política (FP) comprenden: igualdad, democracia, totalitarismo, participación, exclusión, vigilancia y autodeterminación. Se han tocado también discusiones ambientalistas, especistas y transhumanistas.

Es necesario pensar la IA desde un inventario teórico que considere saberes de la periferia, la teoría crítica y decolonial, la discusión de los pensadores de nuestra tradición científico-filosófica, quienes generan una reflexión que adelanta muchos de los temas discutidos hoy en día en las metrópolis tecnológicas en torno a las implicaciones filosóficas, ético-morales, y económico políticas de la IA.

La FP incide en el cuerpo teórico de la IA, para discutir más ampliamente su base epistemológica: considerar otras formas de racionalidad además de la racionalidad moderna (lógica-matemática); los conceptos de agencia e intencionalidad, enfocados en el individuo y no en la colectividad; revalorar la Hipótesis Situada; ampliar el ámbito de aplicación de la IA hacia los problemas sociales; y otros conceptos que en Filosofía de la Computación y de la IA, atañen cuestiones ideológico-políticas (ej. la singularidad o la distinción algoritmo-programa).

Ampliar la visión de la FP de la IA, requiere cuestionar las racionalidades práctica (sus fines) y teórica (sus fundamentos) con planteamientos de nuestros pensadores iberoamericanos. Tal es el cometido de esta propuesta.

Artificial Authorship. Generative Artificial Intelligence and Authorship in the Age of Large Language Models

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Topic: Philosophy of Computing and Computer Science
Keywords: Authorship, Creativity, Generative Artificial Intelligence, Intellectual Property, Large Language Models, Originality

Abstract:

This dissertation examines the notion of authorship in light of the growing popularity of Large Language Models (LLMs). Drawing on the philosophy of technology, it aims to critically reflect on the key features that define what it means to be an author. In particular, it considers the idea that authors enter into contractual agreements and manage intellectual property rights. Moreover, in the social imagination, an author is understood as an individual endowed with creativity and talent, capable of establishing an intimate connection with readers.

However, legal frameworks evolve historically, and originality is inherently subjective. LLMs, for their part, are able to imitate human syntactic structures, enabling them to produce coherent texts. This raises an important question: can LLMs be considered authors? There are already documented cases in which individuals have written and published books with the assistance of LLMs. In such contexts, should the prompt engineer be regarded as the author, and the LLM as a co-author? What, ultimately, distinguishes a human author from an artificial one?

Guided by the philosophy of technology, this presentation seeks to explore the human boundaries of authorship and to reflect on the underlying motivations of writing—why we write, and for whom.

Artificial intelligence and the academic world

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Topic: Ethical Issues in and of Computing
Keywords: Artificial intelligence, ChatGPT, ethics in the digital age

When we include texts or data generated with Artificial Intelligence in an academic work, who holds authorship over those elements? Who is responsible for the validity of the ideas? And more importantly, can we trust AI's contributions to scholarly work? In this talk, we reflect on the role of language models, such as ChatGPT, in the production of academic content and highlight both their usefulness and their risks. Using a specific example — a prompt requesting a paragraph with citations and data—we examine how AI can produce writing that appears coherent and well-supported, even when it includes fictitious references or select authors based on popularity rather than relevance. The key issue is that current regulation is virtually nonexistent. For this reason, we propose starting a dialogue within the academic community to establish clear guidelines that promote the responsible use of AI. We believe this conversation is urgent: as these systems continue to evolve, it will become increasingly difficult to distinguish between content written by humans and that generated by algorithms.

Atmospheric Computing: A Philosophical Approach to Digital Noise as a Technical, Symbolic, and Environmental Interface

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Critical ecology., Digital noise, Digital subjectivity, Philosophy of computing, Technological atmospheres

Atmospheric Computing: A Philosophical Approach to Digital Noise as a Technical, Symbolic, and Environmental Interface

In contemporary urban and digital environments, noise is no longer reducible to an acoustic phenomenon: it has become synonymous with data overload, stimulus saturation, and algorithmic interference. This paper offers a philosophical investigation into digital noise, conceptualized as a liminal interface between computational systems and embodied experience, approached through technical, epistemological, and symbolic dimensions.

From a technical perspective, noise manifests as signal distortion (Shannon, 1948), informational entropy, and non-pertinent or erroneous data that undermines the efficacy of machine learning and predictive modeling (Zhu & Wu, 2004; Bishop, 2006). Emerging paradigms such as noise-based logic (Kish, 2010) and robust analog computing (Wang *et al.,* 2025; Chung *et al.,* 2025) suggest that noise may also serve as a computational vector, challenging conventional signal/noise dichotomies and enabling novel algorithmic architectures.

Philosophically and culturally, recent scholarship such as Portella Castro (2022) and Malaspina (2018) has rearticulated noise as ground*:* a generative, irreducible margin that resists normalization and encodes indeterminacy. Drawing on these insights, this paper introduces the concept of atmospheric computing as a philosophical category that frames computation not merely as symbolic logic but as a distributed, affective infrastructure that configures contemporary digital and urban atmospheres (Sterne, 2012; Morton, 2013).

This theoretical framework further engages with the Frankfurt School's Critical Theory, particularly the critique of instrumental reason (Horkheimer & Adorno, 1947) and technological alienation (Marcuse, 1964), and connects with Berry's concept of the algorithmic condition (2025), wherein digital systems mediate perception and normalize subjectivation.

Ultimately, rethinking digital noise through a philosophical lens not only questions the limits of computational representation, but also opens up space for critical and resistant practices

that recognize noise as a creative, ontological, and political potential.

Beyond the Algorithm: Distributed Epistemic Opacity and the Role of Empirical Adequacy in xAI 2.0

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing

Keywords: Epistemic opacity, Trustworthy AI, explainable artificial intelligence (xAI), model interpretability, stakeholder's desiderata

This paper challenges the common assumption that epistemic opacity in artificial intelligence systems is confined to algorithmic complexity. Instead, it argues that opacity is distributed across the full lifecycle of machine learning systems, encompassing data generation, model training, and deployment decisions, many of which remain inaccessible or invisible to users, developers, and regulators alike. Drawing on the concept of *essential epistemic opacity* (Humphreys 2009) and recent elaborations (Durán & Formanek, 2018; Greif, 2022), the paper identifies three core loci of opacity: data provenance and labeling, design of training sets, and specification of modeling objectives. These dimensions contribute to structural and procedural opacity that cannot be resolved through algorithmic inspection alone.

In response to these challenges, the paper proposes a shift in explainable AI (xAI) from the ideal of *transparency* to that of *empirical adequacy*. While transparency demands full access to internal mechanisms, empirical adequacy—borrowed from philosophy of science—evaluates explanation methods based on their ability to track and predict model behavior across relevant input-output relationships. This reorientation allows for a more pragmatic and epistemically grounded standard in xAI 2.0, particularly when dealing with complex deep learning systems.

The paper concludes by advocating for explanation frameworks that prioritize operational accountability and contextual reliability over full interpretability. By acknowledging the distributed nature of epistemic opacity and embracing empirical adequacy, xAI research can better align with the needs of real-world users, domain experts, and policy-makers in fostering trustworthy AI systems.

Building personal identity in the digital age: Between the physical and the virtual

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Topic: Ethical Issues in and of Computing
Keywords: affordances, digital identity, personal identity, scaffoldings, social media

Building personal identity in the digital age: Between the physical and the virtual

Nowadays, it is practically impossible to separate virtual activities from our daily lives. From paying for services to interpersonal communication, our digital presence often seems to be on par with or even more important than our physical presence. This raises a key question: what happens to personal identity in this context? Although it is complex to consider virtual activities as something completely different from daily experiences, there is a tendency to believe that a person can divide their experiences and develop distinct identities: one in the real world and another in the virtual environment.

This phenomenon is reflected in people who create alter egos in forums, social networks, and video games. How is personal identity constructed in the digital realm? Can we continue to consider them the same person, despite experiencing different realities and acting in different ways? This presentation seeks to answer the question through a more flexible perspective of personal identity that includes the affordances (possibilities for action) that digital technology offers for personal development.

I will explore how technological possibilities allow us not only to experience the world in different ways, but also to perceive ourselves and act in novel ways. In addition, I will analyze the role that emerging technologies such as artificial intelligence, algorithms, and the collection of personal data, including biometric data, play in the creation and expression of a digital identity.

BURIDANIAN INDECISION IN DECISION-MAKING AGENTS

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: Indecision, epistemic state, paradox, thought experiments

It is not far-fetched to assert that one of the most interesting thought experiments in the history of ideas is Buridan's donkey. It is not only a thought experiment, but a paradox with implications in various branches of speculative and practical philosophy, which can be extended to decision-making, computational systems, epistemic logic, automated problem-solving, and artificial intelligence as a decision-making agent.

Buridanian indecision questions the very existence of rational agents, whatever their nature. This indecision is not due to a lack of information, but is inherent to the nature of the decision itself. If the agent decides to make a decision, it must do so with the available information, since more data do not change the agent's epistemic state.

In Buridanian indecision, we are not facing equal options, but rather indifferent options, that is, it does not necessarily imply that the options are equal in all aspects, but rather that the agent does not have a clear preference between them. This paper reviews the genesis of Buridanian indecision in the history of ideas, analyzes the relevance of adopting this notion in the field of cybernetics and computation, explores its scope, and inquires about the prospects of formalizing such a notion.

Closure and the Internal Logic of Life: A Structural Convergence Across Biology, Logic, and Computation

Authors:
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Topic: Theory of Computation, Formal Languages, Logic, and Foundational Mathematics
Keywords: autocatalysis, autopoiesis, category theory, closure, computation, deduction theorem, lambda calculus, logic, self-organization, type theory

Closure is a foundational concept appearing across biology, logic, and computation, often associated with autonomy, self-reference, and the capacity for self-maintenance. In theoretical biology, closure arises in organizational schemes such as *autopoiesis*, *autocatalytic sets*, and *closure to efficient causation*, each emphasizing the idea that a system can produce and sustain the very processes that define it. These notions are central to origins of life research, where closure is often taken as a necessary condition for life.

In logic, *deduction theorems* express closure under implication: if a conclusion 'B' follows from a premise 'A', then the implication 'A → B' follows from the axioms of pure logic. In computation, structural analogs appear in the *lambda calculus*, where *abstraction* enables the formation of function terms from derivations, and in *type theory*, where the *introduction rule for function types* allows functions to be constructed from proofs that assume an input. *Closed categories* in category theory abstract these formal mechanisms, unifying logical and computational closure.

This talk explores how these diverse forms of closure may reflect a deeper structural principle. Using an abstract model of chemistry introduced by Fontana, I argue that closure in biological systems can be formally related to closure in logic and computation. This connection suggests a shared internal logic, a structural condition for autonomy and inference, that spans from living systems to formal systems, and may offer a biologically inspired lens through which to understand computation and deduction.

Cognitive warfare: origin and development of a concept

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Topic: Gender, Politics, and Society in Computing
Keywords: Cognitive warfare, Cyber warfare, Information warfare, Psychological warfare, Soft power operations, Surveillance Capitalism

The creation of the concept of *cognitive warfare* is relatively recent and, however, its development is as rich and complex as the implications of its implementation in the recent past, as well as in the near future, are transcendental.

The aim of this abstract is to track the origin and development of the concept of cognitive warfare in order to highlight the context from which it was born and developed, as well as its rapid evolution, both semantic and operational, based on the crossroads between psychological and influence operations (soft power) on the one hand, and cyberwarfare operations on the other, and which approach requires a multidisciplinary perspective that allows us to account for the tremendous military capabilities that it opens up and that actually have not been sufficiently studied, as well as the ethical dilemmas and the probable civil rights restrictions that would be arise from the development of military programs with clear surveillance and censorship overtones that have not yet regulated by the law, and whose consequences on civil life must be weighed.

Communication strategies in COIL virtual migration projects

Authors:
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Topic: Gender, Politics, and Society in Computing
Keywords: , Artificial Intelligence, COIL, Communication Networks, Digital Literacy, Global Citizenship

Communication strategies in COIL virtual migration projects are essential for achieving participant interaction in the digital space, especially considering the variety of elements involved in these multicultural activities, which are carried out remotely from different geographical areas in the same virtual space, with synchronous and asynchronous communication.

Therefore, different learning styles, different work areas, and diverse worldviews contribute to the comprehensive development of digital citizens.

Díaz said “The internet user then takes on an active role, able to create and disseminate information. At the same time, virtual platforms also provide the opportunity to interact, comment, and express opinions on shared information, using memes as social criticism”. (2022)

Also, the use of resources and tools is based on the knowledge (knowing, doing, being, and being), learning styles, emotional management, and expectations of instructors and participants.

It’s important considerate synchronous communication spaces such as Zoom or Meet, the use of collaborative work resources such as Google Slides, or storage resources such as Google Drive or Dropbox, are part of the knowledge acquisition spaces required for communication strategies to learn how to apply them, transform, and modify coexistence strategies in daily life, both personally, professionally, and academically.

Finally, with this presentation, I will present a quick workbook on what we need to know to communicate always, and especially in virtual spaces. Including concepts such as Global Citizenship, Digital Literacy, Artificial Intelligence, COIL, Communication Networks, because with the strategies make a better way of interacting with others.

Computational Discovery of Therapeutic Targets: In Silico Modeling of TATA-Binding Protein in Chagas Disease

Authors:
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Topic: Biocomputation, Biomathematics, and Artificial Life
Keywords: Drug repositioning, TBP, Trypanosoma cruzi, cheminformatics, computational tools

Parasitic diseases like Chagas remain a global health challenge, exacerbated by drug resistance and limited therapeutic options. This study illustrates how computational tools can drive new modes of knowledge production in biomedical research. We applied an in silico modeling pipeline—combining bioinformatics, cheminformatics, homology modeling, molecular docking, and molecular dynamics simulations—to systematically evaluate over 11,000 FDA-approved compounds against the TATA-Binding Protein (TBP) of *Trypanosoma cruzi*.

Our computational screening pipeline led to the identification of two compounds, DB00890 and DB07635, as promising candidates for targeting the TATA-Binding Protein (TBP) of *Trypanosoma cruzi*. These molecules demonstrated favorable interaction profiles in silico, suggesting their potential as inhibitors of this key transcription factor. To complement and validate the computational predictions, we conducted a series of in vitro biological assays. Notably, DB00890 exhibited moderate trypanocidal activity, effectively reducing parasite viability across different T. cruzi strains. Moreover, DB00890 displayed a moderate degree of selectivity, affecting the parasite while maintaining acceptable cytotoxicity levels toward host macrophage cells (J774.2). This integrated approach—combining digital modeling with experimental validation—highlights the potential of computational methods not only to accelerate drug discovery but also to inform the design of targeted, selective therapies for complex parasitic diseases.

Beyond its biomedical contributions, this work exemplifies how digital computation is reshaping epistemic practices in drug discovery—redefining what counts as evidence, how molecular interactions are modeled, and how therapeutic hypotheses are generated. We reflect on the philosophical implications of in silico modeling in science, particularly in addressing complex biological systems.

Computational Psychiatry, Interoception, and Endorhythmic Scaffolding

Authors:
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Topic: Frontier Artificial Intelligence, Neurocomputation, and Computational Linguistics
Keywords: Computational psychiatry, cognition, computational models, interoception

Computational psychiatry increasingly models interoception (i.e., the perception and regulation of internal bodily signals) as central to understanding mental disorders. Two challenges arise. First, how can the pervasive influence of interoception on cognition be understood? Standard predictive coding accounts often treat interoceptive signals as static inputs, yet growing evidence shows that cognition is rhythmically modulated by endogenous bodily cycles such as respiration and heartbeat. Here, the framework of endorhythmic scaffolding clarifies how these rhythms provide temporal structures that entrain neural activity and scaffold cognitive processes. Second, how should we interpret the striking heterogeneity of interoceptive findings across disorders and individuals? Rather than methodological noise, this may reflect stable interoceptive subtypes requiring specific computational models. Together, scaffolding and heterogeneity suggest that computational psychiatry must expand toward richer accounts of how interoception shapes cognition and varies across populations.

Contrasting conceptual frameworks to assess neural networks: Between habitus and collective intentionalities

Authors:

Javier Toscano, Alice Salomon Hochschule, Berlin, Germany

Topic: Frontier Artificial Intelligence, Neurocomputation, and Computational Linguistics

Keywords: Neural networks, collective intentionalities, critical algorithm studies, habits

This presentation offers a comparative analysis of two conceptual frameworks—*machine habitus* and *collective intentionality*—to critically assess neural networks (NNs) and large language models (LLMs) as socio-technical systems. Drawing on Massimo Airoldi's *Machine Habitus* (2022), the study first explores how neural networks, through training, acquire dispositions analogous to human habitus (inspired by Bourdieu), internalizing patterns that reflect the social and cultural biases of their data environments. This framework enables a critical understanding of how social inequalities and historical biases are reproduced in machine behavior.

In contrast, the notion of *collective intentionality*, as developed from Michael Tomasello and reinterpreted by Javier Toscano (2022a, 2022b), foregrounds the collective and institutional dimensions of algorithmic functioning. Rather than viewing AI systems as isolated agents, this perspective sees them as emergent phenomena within broader socio-computational infrastructures. It posits that NNs express forms of pre-reflective collective cognition, embedded in the intentions and practices of the human institutions that develop, deploy, and regulate them.

The presentation examines the philosophical and historical lineages of both concepts (e.g., Barandiaran & Di Paolo 2014; Brejdak 2021), analyzing their epistemological foundations and applicability to AI. Through a systematic comparison, it evaluates the strengths and limitations of each framework in explaining machine learning processes, decision-making dynamics, and normative alignment.

Crucially, the research considers the ethical implications of these approaches: How do "machine habits" perpetuate structural injustice? What responsibilities emerge if AI systems are seen as bearers of collective intentionalities? By bridging theoretical inquiry and AI critique, the study contributes to debates in AI ethics and epistemology, offering tools for understanding neural networks not merely as technical systems, but as entangled actors within human social and institutional life.

Conversatorio TIES - Revista de Tecnología e Innovaciónen Educación Superior.

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Topic: Gender, Politics, and Society in Computing
Keywords: Educación, humanidades digitales, tecnología

Este conversatorio tiene como propósito presentar y dialogar en torno al más reciente número de TIES, Revista de Tecnología e Innovación en Educación Superior, una publicación semestral de acceso abierto editada por la Universidad Nacional Autónoma de México (UNAM), a través de la Dirección General de Cómputo y de Tecnologías de Información y Comunicación (DGTIC). La revista se ha consolidado como un espacio especializado para la divulgación científica sobre innovación en cómputo y tecnologías digitales aplicadas a las Instituciones de Educación Superior (IES), ofreciendo una mirada crítica, propositiva y actualizada del papel de la tecnología en los procesos de enseñanza, investigación y gestión académica.

El número 12 de TIES reúne cinco artículos que muestran la diversidad, profundidad y relevancia de las discusiones actuales en torno a la tecnología y la educación superior. Ernesto Priani ofrece una reflexión sobre los fundamentos epistemológicos de las humanidades digitales, abriendo una discusión sobre su estatuto científico. Iván Meza y colaboradores presentan un estudio experimental sobre la inducción de rasgos de personalidad en un Modelo Masivo de Lenguaje (MML). Vicente Torres examina los sesgos algorítmicos en imágenes forenses generadas mediante inteligencia artificial, destacando implicaciones éticas y técnicas. Suyin Ortega y Ricardo Tavira evalúan el desempeño de herramientas tipo Retrieval-Augmented Generation (RAG) para la búsqueda de información académica, mientras que Ángel Barrios y su equipo exploran el valor didáctico de GUI_srsRAN_5G, una interfaz gráfica de código abierto para redes 5G privadas.

Este conversatorio busca propiciar el intercambio de ideas entre autores, lectores y especialistas interesados en el impacto y las posibilidades de la tecnología en el ámbito universitario, promoviendo una lectura crítica y colaborativa de los temas abordados.

Del flujo de electrones a la experiencia: Análisis de la materialidad digital, sensorialidad e interacción persona-ordenador. Aportes desde la experiencia háptico-auditiva.

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing

Keywords: cognición corporeizada, corporalidad, dicotomía virtual/real, interacción digital, materialidad digital

Este trabajo propone una crítica profunda a la dicotomía tradicional entre lo virtual y lo real en la interacción humano-computadora. A través del estudio de experiencias digitales háptico-auditivas de personas con discapacidad visual, se demuestra que toda experiencia computacional está arraigada en una materialidad expandida, donde cuerpo, tecnología y cultura coexisten de forma indisoluble. Se incorporan enfoques desde el enactivismo y la antropología de los sentidos para argumentar que lo digital no es una abstracción inmaterial, sino una realidad corporal y simbólica. La materialidad digital opera en dos niveles: uno biológico-físico, que transforma señales sensoriales en datos digitales; y otro sociocultural, que dota de significado a dichas señales. Entre sus aportes filosóficos destacan una nueva ontología digital centrada en el cuerpo, una epistemología basada en la sensorialidad, y una crítica al oculocentrismo dominante. Los entornos mediados a través de las interacciones hápticas-auditivas se presentas así como un espacio revelador de experiencias digitales alternativas, ricas en significados sensoriales e implicaciones éticas y tecnológicas.

Densification and Emotion-Driven Network Evolution in Open Social Systems

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Topic: Gender, Politics, and Society in Computing
Keywords: affective states, complex netwworks, densification scaling

Human interaction has shifted from direct, face-to-face communication to large-scale, digital discourse where individuals engage with both content and each other. Platforms like YouTube provide an environment for dynamic social interactions, where discussions emerge around video content and evolve over time. These engagement networks operate as open systems, expanding and contracting as users freely enter and exit discussions. Many empirical networks exhibit a relationship between total edges () and active users () that is consistent with a *densification scaling* property, where increases superlinearly with . In temporal social networks, this dynamical property between and is influenced by (i) fluctuations in population size (), (ii) changes in the probability of node connections (), or (iii) both. Given a fixed connection probability and a growing population, conventional superlinear scaling emerges. Conversely, for a fixed population size and increasing connection probability, exhibits an accelerating growth pattern, where increases with at a rate higher than conventional superlinear scaling.

In this study, we investigate how network structures and emotional expressions shape the evolution of YouTube discussion networks. We specifically examine variations in network structure via estimates of network population and activity level (), and their relationship with global affective states over time. Up to now, studies exploring structural change in networks have primarily relied on global network metrics (and), treating affective states as mere byproducts of interaction. With the availability of more detailed interaction data that includes users' emotional expressions, we can now investigate the role that emotions play in influencing densification.

Our results show consistency in the scaling pattern across datasets across diverse forms of discourse, from diplomatic discussions to highly polarized debates. This suggest that a universal structural feature; namely, the *open-nature* of online systems is likely responsible for the conventional scaling. We also find that emotions are more than byproducts.

Desintegración del futuro: ideología de la desesperanza, ciberespacio y capitalismo

Authors:
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Topic: Gender, Politics, and Society in Computing
Keywords: Capitalismo, Ciberespacio, Filosofía de la tecnología, Hauntología, Ideología, Marxismo, Melancolía de izquierda, Nostalgia política, Redes sociales

Esta investigación constituye un primer acercamiento al estudio de las principales manifestaciones en el ciberespacio de un fenómeno sociocultural: la idea colectiva sobre la presunta imposibilidad de concebir un futuro alternativo al capitalismo. Llamamos a este fenómeno la «ideología de la desesperanza».

Buscamos exponer algunos mecanismos ideológicos en los que el modelo neoliberal se apoya para neutralizar las manifestaciones políticas, sociales y culturales alternativas al estado de cosas actual. A partir de los términos *realismo capitalista* y *precorporación* (Fisher 2016), explicamos el surgimiento de sentimientos colectivos de desesperanza e incapacidad de reconfigurar el futuro a causa de las transformaciones geopolíticas de los años noventa y su papel en la conformación de ideologías y expresiones socioculturales que rescatan ideas, prácticas, estéticas y productos culturales del siglo XX.

Se toman las nociones de *melancolía de izquierda* (Brown 1999), *hauntología* y *superyó leninista* (Fisher 2018, 2024) para describir la idealización de épocas pasadas específicas y los intentos de regresar a ellas. Para entender las manifestaciones socioculturales nostálgicas dentro del ciberespacio, retomamos tratamientos marxistas del concepto de ideología (Gramsci 1967, 1971; Eagleton 1997; Žižek en Fiennes 2012), mismos que nos permiten explicar la relación entre el neoliberalismo y el desarrollo de la «ideología de la desesperanza».

Asimismo, para develar los desafíos ideológicos y epistémicos de este fenómeno en el ciberespacio, empleamos los análisis sobre los problemas derivados de la aplicación de modelos algorítmicos en las actividades cotidianas (O'Neil 2016), el fenómeno de las *burbujas de filtros* (Pariser 2017) y las implicaciones sociopolíticas del uso de redes sociales (Van Dijck 2013).

Finalmente, proponemos que la difusión de la ideología de la desesperanza en el ciberespacio actúa como un recurso ideológico capaz de producir la inmovilización política de los individuos, como también la desmovilización de las actividades izquierdistas contemporáneas.

Desiring Machines and Digital Biopolitics: A Critique of Predictive Algorithms

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Topic: Ethical Issues in and of Computing
Keywords: Desiring machines, algorithmic resistance, digital biopolitics, digital ethics, individual autonomy, predictive algorithms

This proposal examines how predictive algorithms operate as “desiring machines” within a framework of digital biopolitics, extending Deleuzian theory into contemporary computational practices. By analyzing the anticipatory mechanisms embedded in recommendation engines and behavioral profiling systems, the study reveals how algorithms pre-emptively shape user preferences and subjectivities—often without overt consent or awareness. Building on Michel Foucault’s notion of biopower, the research interprets large-scale data governance as a form of population control, where algorithmic prediction becomes a tool for managing life processes in real time.

The project unfolds in three phases. First, it deconstructs the technical architectures of predictive algorithms to demonstrate their alignment with Deleuze and Guattari’s concept of desiring-production. Second, it situates these processes within a biopolitical regime, highlighting ethical concerns around autonomy, surveillance, and consent. Third, it explores modes of resistance, from open-source alternatives to critical design interventions, proposing pathways to re-envision human-machine co-evolution. The research contributes to debates in technopolitics, algorithmic ethics, and philosophy of computation by offering a nuanced critique of how digital desire and governance intersect.

This study will appeal to scholars in AI ethics, computational philosophy, and cyberculture studies, providing theoretical insights and practical recommendations for rethinking predictive systems in an era of algorithmic biopolitics.

Discussing authorship through AIs: Legal ethical implications of the adoption of intelligent technology in the Copyright sector

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Topic: Ethical Issues in and of Computing
Keywords: Legal artificial intelligence - Authorship - Copyright law

AI is profoundly impacting areas once deemed incompatible with this technology, sparking ethical and legal debates concerning the copyright and legal status of AI-generated works.

This proposal's core aim is twofold: first, to examine the effectiveness of authorship in the AI era. Second, to analyze how authorship can be extended to scenarios where AI plays a substantial role in the creative process. The intention isn't to remove the human element from copyright but to foster a collaborative approach where AI enhances human creativity.

Traditional copyright law, exemplified by frameworks in the EU, US, and UK, generally mandates a human element for legal protection. For instance, the EU's Artificial Intelligence Act requires users to maintain documentation related to AI training models. Similarly, the US, like the UK's Copyright, Patents and Designs Act of 1988, emphasizes human presence in creation for protection, though this is often assessed case-by-case.

The research will employ both inductive and deductive methodologies. The former will analyze current legal positions on AI authorship in the creative sector, while the latter will evaluate their effectiveness and propose improvements for defining authorship in AI-related contexts.

This work seeks to establish a clear position on the role of authorship in the creative sector and its compatibility with the advantages of intelligent technology in the digital age.

References

Charles, D. R. (2025). AI as artist: agency and the moral rights of creative works. *AI and Ethics*, 1-12.

Komuves, D., Niebla, J., Schafer, B., & Diver, L. (2015). Monkeying around with copyright: animals, AIS and authorship in law. *CREATe Working Paper*, (1), 11.

Quintais, J. P. (2025). Generative AI, copyright and the AI Act. *Computer Law & Security Review*, *56*, 106107.

Schafer, B., Komuves, D., Zatarain, J. M. N., & Diver, L. (2015). A fourth law of robotics? Copyright and the law and ethics of machine co-production. *AI and Law*, *23*(3), 217-240.

Edupunk 2.0 redefiniendo la educación en la era del tecnofeudalismo

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Topic: Philosophy of Interaction Design
Keywords: Edupunk 2.0, inteligencias artificiales generativas., tecnofeudalismo, territorios digitales

En la presente ponencia se postula la propuesta educativa denominada Edupunk 2.0, la que es una reinterpretación del modelo Edupunk surgido en el inicio del siglo XXI y cuyo lema era “hazlo tú mismo”.

Esta propuesta se vio limitada por la complejidad de la programación de aprendizaje para los agentes educativos que no se vinculaban directamente con el campo de la informática; por lo que fue perdiendo fuerza a mediados de la primera década del siglo XXI.

Sin embargo, la ponencia retoma la importancia de volver a recuperar la filosofía y el modelo de Edupunk en el 2025, debido al control y poder que existe cada vez con más fuerza del terriroiro digital con finos mercantilistas que se adapta al naciente modelo Tecnofeudalista.

Por otra parte, la barrera existente en programación se debilitó gracias a las inteligencias artificiales generativas que permiten la generación de código de forma simplificada y permite la construcción de objetos y espacios digitales que permiten la apropiación del territorio digital por medio de la construcción de entornos educativos digitales libres.

El internet como territorio en disputa

Authors:
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Topic: Gender, Politics, and Society in Computing
Keywords: cultura cibernética, desterritorialización, hegemonía cultural, internet, resistencia digital, semiocapitalismo, tecnocapitalismo, territorialización

Este trabajo propone una lectura crítica del internet como un territorio en disputa, donde se libra una constante lucha por la producción de subjetividades, sentidos y deseos. Lejos de ser un espacio neutral, el internet ha sido progresivamente territorializado por las lógicas del capital, convirtiéndose en una maquinaria semiocapitalista que captura nuestros deseos y atención en función de la productividad y el consumo, fungiendo como una herramienta del realismo capitalista.

Este enfoque se aleja del paradigma computacional clásico y se alinea con una filosofía ampliada del cómputo, centrándose en su dimensión simbólica, cultural y afectiva. Se pretende analizar cómo más allá de ser sólo un sistema técnico que transmite información, es una infraestructura sociotécnica que organiza, condiciona e inscribe formas específicas de racionalidad, control y subjetivación.

Recuperando la noción gramsciana de hegemonía cultural, se analiza el internet como un espacio de confrontación ideológica en el que narrativas dominantes y subalternas compiten por el poder cultural. De esta manera, es posible plantear que puede ser desterritorializado. Su uso reagenciado abre la posibilidad de prácticas subversivas, como el hacktivismo, movimientos de resistencia digital, entre otros. Sin embargo, no basta con un uso alternativo o cambios individuales. Se requiere intervenir en su infraestructura y modos de producción de sentido: redes comunitarias, servidores autogestionados, software libre, repositorios digitales abiertos, y proyectos de alfabetización digital crítica.

En suma, se apunta a construir una contrahegemonía cultural desde lo digital, capaz de interrumpir la lógica capitalista y abrir espacios de cooperación, conocimiento compartido, autonomía y resistencia. Desterritorializar el internet significa hackear sus formas establecidas de subjetivación, produciendo líneas de fuga desde dentro del territorio capturado. Aún en medio de su creciente privatización y captura algorítmica, el internet sigue siendo un campo donde disputar el poder cultural e imaginar otras formas de vida y comunidad.

El nacimiento del algoritmitariado en la trama de la muerte del capitalismo. A propósito de la sociedad dataísta

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Algoritmitariado, capitalismo, clase algorítmica, dataísmo

La era dataísta ha alterado drásticamente la constitución de las sociedades en el siglo XXI al modificar y crear para sí innovadores mecanismos de valor y, con ello, nuevos entramados de relaciones sociales que ahora son mediadas por la producción, acumulación y procesamiento de masivos bancos de datos, con el fin de que sean usados para —por parte de la clase algorítmica (naciente clase social gobernante)— modular, intervenir, acoplar y sugestionar algorítmicamente a las personas —ahora convertidos en el algoritmitariado (nueva clase antagónica)— para que compren, participen, se comporten, relacionen, interactúen e incluso existan como se calcula de antemano que lo hagan, mientras, paradójicamente, son explotados al momento en que trabajan de manera gratuita al producir cantidades inmensas de información. Dicho proceder relata una cosa: el nacimiento de la sociedad dataísta y la muerte paulatina de la era capitalista.

Enhancing Student Learning in the Age of Powerful AI: A Pedagogical Proposal

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Topic: Gender, Politics, and Society in Computing
Keywords: AI-generated content, Comparative learning, assignment design, in-class discussion, pedagogy

This presentation introduces *comparative learning*, a pedagogical method where students critique AI-generated essays using the same rubric applied to their own philosophical writing. In recognition of the widespread use of various "AI assistants" in students' academic lives nowadays, this approach invites them to compare an AI-generated product and its human-generated counterpart. It also exposes AI's limitations in handling nuance and complex thought. In this talk, I will address three challenges: tracking AI use, crafting philosophically rich prompts, and building a course module grading an AI-generated essay and comparing it to its human-generated counterpart. Rather than endorsing or rejecting AI outright, this method uses its outputs as a foil to cultivate students' critical skills and encourage them to think about what it is to have genuine expertise.

Entre simulación y comprensión: límites epistémicos de los modelos de lenguaje artificial

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing

Keywords: Epistemología, Inteligencia artificial, autoridad epistémica, conocimiento

Se afirma en círculos tecnológicos que las máquinas ya no solo realizan cálculos matemáticos complejos mediante comandos lógicos, sino que pueden comunicarse con los humanos gracias al lenguaje precargado con entrenamiento profundo. A nivel epistemológico, Rico Hauswald postula que, de la misma manera en que al ser humano se le considera una autoridad epistémica (AE), puesto que es capaz de transmitir conocimiento a otros, también la IA podría ser una autoridad epistémica artificial (AEA) debido a su facultad de simbolizar y brindar discursos que son, hasta cierto punto, coherentes mediante el lenguaje textual.

La cuestión central es revisar la postura de Hauswald, sus argumentos a favor y en contra de tal tesis, en el marco de la pregunta por la capacidad de la IA de figurar como AEA. En tal sentido, expondré algunas objeciones por las cuales pienso que la IA no es una autoridad titular, sino una herramienta auxiliar, puesto que carece de configuraciones perceptivas por las que se disciernen las nociones conceptivas tanto de entrada como las de salida. Ello hace que su facultad epistemológica, si es que la tiene, sea incompleta, limitada, o en su caso, defectuosa, debido a que no tiene en su mecanismo algorítmico la característica igual o simulada de lo que se considera como la cognición básica perteneciente a animales, incluídos los humanos. Para explicarlo me apoyaré en la concepción de cognición básica propuesta por la autora Susan Carey. En un primer apartado se expondrá críticamente la visión de Hauswald y en un segundo apartado se brindarán las razones, con apoyo del término de Carey, para negar la titularidad de la IA en procesos de comunicación y de enseñanza.

Epistemic Character of AI as a Complex System

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Adaptive system, Artificial intelligence, Complex system, Computation, Emerging Property, Epistemology, Knowledge, Non-linearity

Is knowledge possible for artificial intelligence? What would be the necessary epistemological conditions for this to occur? This paper aims to provide an answer to these questions through a philosophical analysis. In order to address these inquiries, a hypothesis will be developed as follows: If artificial intelligence is considered a complex, adaptive, non-linear system with emergent properties, then it is possible to argue that AI systems are capable of generating epistemically valid forms of knowledge, even if these do not align with traditional models of human knowledge theories. This perspective opens up the possibility of expanding classical epistemology—based on conscious subjects—to include artificial systems that produce knowledge. Therefore, the objective is to examine the foundations that allow AI to be considered a complex system and to assess the role of the concept of emergence. Additionally, epistemological issues related to justification and explanation will be revisited, focusing on the scope and limits of knowledge—but directed toward the context of artificial knowledge and the complexity framework in which AI may be regarded as an epistemic agent.

Epistemic opacity vs reliability: some lessons from the binary offset effect in the SNIFS

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Epistemic opacity, SNIFS, empirical adequacy, reliability

Here, we explore the reliability of measurement processes in contexts governed by high degrees of ignorance due to heavy technological dependency. In particular, we focus on the reaction of the cosmologists towards the binary offset effect on the SuperNova Integral Field Spectrograph (SNIFS) and its consequences on the risk management strategies in the building of the Dark Energy Spectroscopic Instrument (DESI).

Our main thesis can be summarized as a plea for a broader epistemic shift: rather than seeking full transparency or eliminability of opacity, scientists must develop new strategies for justifying trust under persistent epistemic opacity. If we are to make sense of the reliability of such systems, it is not sufficient to trace the transparency of individual components; instead, we must understand how local indicators of empirical adequacy and cross-system coherence come to play a foundational role in legitimizing scientific inference and practice.

First, we discuss the basics of the scientists' problematic trust in the products of epistemically opaque processes. Second, we present in more detail the case of the binary offset effect in the SNIFS and the corresponding modifications made in DESI.
Third, we explain how the assessment of the empirical adequacy and epistemic reliability in such contexts would demand a broader epistemic shift. Finally, we present some final remarks.

Facial Emotion Recognition Using an Evolutionary Convolutional Neural Network

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Topic: Frontier Artificial Intelligence, Neurocomputation, and Computational Linguistics
Keywords: Convolutional neural network, Evolutionary algorithms, Facial emotion recognition, Green computing

Recent advances in machine learning, such as the use of convolutional neural networks, have driven significant improvements in emotion recognition. However, these achievements demand high energy use and contribute to a growing carbon footprint. This work draws on insights from the philosophy of computing, proposing an approach that integrates technical performance with environmental accountability. A methodology is presented that evaluates various convolutional network architectures for facial emotion recognition, measuring accuracy, energy consumption, and CO_2 emissions during training. Additionally, a coarse-to-fine model enhanced with evolutionary algorithms is implemented, showing that more efficient systems can be built without disregarding their broader environmental implications or the long-term trajectory of technological development.

Gender Bias in Artificial Intelligence Applied to Health: A Systematic Review

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Topic: Gender, Politics, and Society in Computing

Keywords: Artificial Intelligence, Bias., Gender

Artificial intelligence has been widely used in the healthcare field, the lack of regulation and its applications for diagnosis, prevention, and treatment have allowed its use to spread widely, however, there are risks associated with biases, especially demographic ones such as gender and populations with a digital divide. This work presents a critical synthesis on gender biases in AI, with a special focus on the healthcare sector and an ethical reflection on its impact. A review was carried out on large language models (LLMs) and automated systems, identifying trends, gaps in the literature, and emerging strategies to mitigate these biases. The main findings show that structural biases are transferred to algorithms and their reproduction negatively impacts historically marginalized populations, increasing the gap in care and behaviors that present significant ethical dilemmas, especially in the healthcare field.

Ghost in the shell: El vínculo del hombre con la IA.

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Ghost in the shell: El vínculo del hombre con la IA ética ontología epistemología

En este breve ensayo se examina el vínculo que el hombre tiene con la inteligencia artificial, la cual se refiere en sus siglas IA, para entender este vínculo se plantea la IA como una herramienta, como se le puede entender desde la obra de Schopenhauer, del mismo modo se plantea su valor como una especie de prótesis que ayuda suplir carencias o ampliar habilidades debido al texto de Roger Bartra *Cerebro y libertad*, para fines de dicha revisión se toma de ejemplo la obra *Ghost in the shell* película de anime del año 1995 en donde ya podemos notar una relación íntima entre el hombre y ciertas herramientas tecnológicas, de ello también se desprende la importancia de entender cómo usamos lo que está a nuestro alcance para evitar ingenuidad o ambigüedad, es decir se busca entender el modo que el humano usa la tecnología como herramienta para su beneficio y como esta IA puede ser vista.

Human creativity? The problem of defining when machines also create.

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Topic: Aesthetic Issues in and of Computing
Keywords: Creativity, Definition, GenAI, Human, Machines

Creativity has become a topic of interest for researchers in various fields. However, despite this interest and the increase in empirical studies, aspects such as its definition and evaluation have been the subject of continuous debate. The “standard definition of creativity” consider it as: “the ability to generate new (original) ideas that are useful (appropriate)”. For some experts, this definition is very focused on the production of something tangible and leaves aside another equally or more important perspective: the generation of ideas, which involves various cognitive processes.

With the advent of advanced technologies such as the Gen AI, the issue is back on the table and a series of questions and concerns are generated: Can machines solve problems in the same way as human beings?, Can the solutions provided by these models be considered “creative”? In the midst of this debate, the concept of creativity appears at the center. Could our “humanity” be at stake?

Researchers and laboratories around the world have begun to enter into this debate, studying the interaction that has been taking place for years between machines and humans during their creative activity. It is not surprising that we know more and more examples of “co-creation”. The study of creativity in virtual environments, the use of avatars and “Divergent thinking bots” has also generated interesting results.

It has become necessary to propose adjustments to the standard definition in order to differentiate creations made by human beings from those produced by a program. Experts in the field have published and disseminated “manifestos” on their positions, pointing out the importance of considering the social, environmental, cultural and legal implications involved in this phenomenon.

Maybe in the future we will talk about something different, but for now creativity is still part of what we consider human experience.

HUMAN-AI COORDINATION IN DEMOCRATIC DELIBERATION PROCESSES

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Topic: Gender, Politics, and Society in Computing
Keywords: Artificial Intelligence (AI), attention, cooperation., democratic deliberation

What are the conditions under which Artificial Intelligence (AI) and humans can coordinate in democratic deliberation processes? This proposal seeks to describe some parameters of cooperative interaction between human and artificial agents toward shared democratic deliberation goals. To do so, we propose *attention* as a starting point. As a cognitive dimension common to both, attention serves as the gateway to describing highly operational concepts. To achieve this, we aim to: 1) provide a theoretical description of cooperative interaction between human-artificial agents for joint deliberation goals based on attention, and 2) identify which human cognitive abilities—beyond attention—are fundamental in this deliberative interaction. In addition to our theoretical proposal—and to ground our framework in empirical data—we will present progress in designing a "democratic" chatbot. This chatbot acts as a mediating agent among human participants to reach democratic deliberative choices, while evaluating the effects of such coordination on human cognitive skills.

Interdisciplinary Complexity and Theoretical Necessity in Data Science

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: Data Science, Epistemic Field, Epistemology, Interdisciplinarity, Theoretical Frameworks

Data Science has rapidly emerged as a pivotal interdisciplinary field, yet its conceptual boundaries remain ambiguous. Traditional models—such as Venn diagrams—fail to capture the true complexity and evolving nature of the discipline. This work proposes a shift in perspective: instead of viewing Data Science as a mere intersection of skills, it should be understood as an "epistemic field" —a dynamic, historically situated entity defined by its theories, applications, practitioners, and societal context.

By adopting this epistemic framework, the article highlights how Data Science integrates knowledge from statistics, computer science, mathematics, domain expertise, social sciences, and the philosophy of computer science. This convergence enables innovative solutions to complex problems but also introduces tensions regarding epistemic authority and disciplinary boundaries. The field’s applied orientation distinguishes it from basic sciences, emphasizing practical problem-solving across sectors like industry, health, and finance.

Crucially, the article challenges the notion that Big Data renders theory obsolete. Theory is not obsolete. Far from it. Theoretical frameworks are indispensable for interpreting data, guiding inquiry, and transforming raw patterns into meaningful scientific knowledge. The argument is illustrated through cases such as climate change research, where robust models are essential to make sense of vast datasets.

The interdisciplinary nature of Data Science also raises ethical and epistemological challenges, including bias, transparency, and reproducibility. As the field evolves with advances in AI and deep learning, a flexible yet rigorous conceptual approach is needed to ensure responsible knowledge production. Ultimately, conceiving Data Science as an epistemic field fosters a deeper philosophical understanding and supports its responsible development in the digital age.

Justifying Homotopical Logic

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Topic: Computational Philosophy
Keywords: category theory, constructive logic, foundations of mathematics, homotopy type theory, univalent foundations

This talk explores two complementary justifications for Univalent Foundations and homotopical logic. The first part addresses the role of *internal language* in category theory as a foundational tool. Categories with sufficient structure—such as topoi—can serve as models of mathematical universes. Reasoning within these internal languages contrasts with external, meta-theoretical reasoning, underscoring the importance of distinguishing internal and external viewpoints in foundational work. Internal reasoning facilitates generalization and helps avoid non-constructive assumptions typical of classical meta-theory.

The second part adopts a model-theoretic lens to justify the logical status of the Univalence Axiom. Introduced by Voevodsky, this axiom states that identity of types corresponds to equivalence—a principle rooted in homotopy theory. In the homotopical interpretation of Martin-Löf Type Theory, types correspond to spaces, and identity is understood as homotopy equivalence. The Univalence Axiom thus formalizes the idea that mathematical objects are invariant under equivalence, providing a precise internalization of this meta-theoretical principle.

These perspectives converge in the framework of Homotopy Type Theory (HoTT), which serves as the supposed internal language of ∞-topoi—categorical structures that generalize and expand set-theoretic models. Beyond its theoretical significance, HoTT has become central to the **formalization of modern mathematics** in interactive proof assistants such as Coq, Agda, and Lean. These systems leverage the homotopical and constructive foundations of HoTT to rigorously formalize complex mathematical theories with machine-verified proofs.

Living Algorithms: Coevolving Computation Between Bacterial Plasmids and Cellular Automata

Authors:
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Topic: Biocomputation, Biomathematics, and Artificial Life
Keywords: bacteria, bioputing, cellular automata, open hardware, plasmids, unconventional computing

We present a heterotic hybrid computing device composed of a coevolving system that integrates *in vivo* bacterial plasmid populations with *in silico* elementary cellular automata (ECA). This biologically-algorithmic coupling enables dynamic updates of the bacterial growth environment, guided by the interaction between a living, evolving substrate and a simple rule-based system with Turing-complete computational potential. The system operates autonomously as an unsupervised installation, facilitating a responsive dialog between a primordial open-ended biological process and a deterministic digital entity.

Physically, the device is actuated by a micro-pipetting robot that performs periodic serial transfers of bacterial populations and inoculates nutrient media into 96-well plates. A sensory feedback layer, implemented via a Raspberry Pi–controlled open-source microscope, measures the optical density of cultures at each time step. These readings inform real-time updates of the ECA rule via a machine learning layer, creating a closed-loop interaction that allows the system to adapt across domains.

This architecture yields a non-reducible computational system wherein the cross-domain entanglement of bacterial and digital states produces emergent dynamics that transcend the sum of its parts. By propagating dual, coevolving substrates in time, the system enacts a novel mode of communication between two distinct yet responsive forms of primordial intelligence—biological and algorithmic—without requiring anthropocentric interpretation or supervision.

Machines, Freedom, and Danger

Authors:
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Topic: Ethical Issues in and of Computing
Keywords: Artificial Intelligence, Compatibilism, Existential Danger, Freedom

Does the possibility of machine freedom pose an existential threat to humanity? In other words, should we add this to the list of worries related to Artificial Intelligence? In his 1993 *Artificial Intelligence*, Jack Copeland argues that machines might achieve freedom, but only the compatibilist sort. I argue that if compatibilist freedom is the only sort of freedom available to machines, then machine freedom *per se* does not pose an existential threat to humanity. Alternatively, this means that if machine freedom in fact poses an existential threat, then some freedom beyond that of the compatibilist sort must be available to machines.

Modeling transitional probability learning and target detection from a neurocomputational framework

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Topic: Computational and Non-Computational Cognitive Science
Keywords: artificial neural network, neurocomputational model, reaction time, target detection, transitional probability learning

Statistical learning, the ability to identify recurrent distributional patterns in the environment, is implicated in multiple cognitive abilities and complex behaviours, and numerous neural plasticity mechanisms are thought to be involved. Transitional probabilities between stimuli are among the main statistical properties that can be recognized and learned by humans and other species. In a typical *Target detection task*, reaction times are measured and target objects are preceded by either fixed or random stimuli sequences. During fixed sequences, transitional probabilities are higher and It's considered that detection times decrease as a function of learning, thus predictions of target occurrence are based on preceding stimuli. In this study, we ran several computational simulations of target detection tasks. The simulations were implemented in artificial neural networks including three key components: Hebbian learning, residual activation and Gaussian noise. The model operation has two stages: the statistical learning and response to target objects (*i.e.*, target detection). In the learning phase the model strengthens or weakens the connection weights through a Hebbian learning algorithm that resembles long-term neural plasticity mechanisms. In the target detection phase, a response unit accumulates activation that comes from both the target unit and from other units through the Hebbian weights, until a threshold is reached. The model accounts for the main results obtained in the simulated empirical studies and provides evidence for the cognitive and neural mechanisms that could be implicated in the task. Furthermore, exploring the variation of model parameters could provide predictions and explanations about the performance in the task of populations with learning or memory disabilities such as participants with autism or Down syndrome.

Natural computing: a dialogue between Luis Pineda, David Marr y Andy Clark

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: Natural computing, mode of computing, predictive processing, representation

In his recent work, Dr. Luis Alberto Pineda explains that computing is a mixed process involving an objective component—namely, the mechanical transformation of representations—and a subjective component, which consists in the interpretation of those representations. In artificial computing, the transformation process is carried out by a machine, but the interpretation is done by a human being. In contrast, in natural computing (if it exists at all), both aspects must be performed by the same entity—let's say, the brain.

However, it is not clear that the brain performs traditionally understood algorithmic processes, nor is it clear that symbolic representations are involved in its functioning. Therefore, it remains an open possibility that there is no mode of computing associated with the brain, and, consequently, that the mind might not be a computational process.

I do not agree with this point of view. In this presentation, I attempt to explore possible representations and transformation processes associated with the brain in order to defend the concept of natural computation. I draw insights from David Marr's theory of vision—particularly his work on early visual representations—and from recent work in the philosophy of mind, especially Andy Clark's theory of predictive processing. The result is the view that the mind (as instantiated in the brain) is a computational device, although perhaps not a traditional one—it may lack a symbolic level.

Non-human error, the sublime, the beautiful, and the grotesque in postdigital culture: an approach from the philosophy of computing and aesthetics

Authors:
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Topic: Aesthetic Issues in and of Computing
Keywords: Computacional esthetics, glitch, non-human error

The expansion of computing into all areas of cultural life has generated new forms of perception, creation, and aesthetic reception. Categories such as the sublime or the beautiful are no longer understood solely through nature or traditional art; they now include computational systems, algorithmic processes, and artificial intelligences. In postdigital culture, error, noise, glitch, or decomposition appear as aesthetic expressions in themselves.

This research aims to contribute to a critical dialogue between artistic practice, aesthetics, and the philosophy of computing, offering new perspectives on the criteria by which we define what is aesthetically significant in our time. Computing mediates the aesthetic and it acts as an ontological agent that radically transforms the meanings of the sublime, the beautiful, and the grotesque, shifting their origin from nature or subjectivity to algorithmic systems and technical infrastructures. This study seeks to analyze how computational technologies reshape conceptualizations of aesthetic categories, through three sections: A) a critical philosophical analysis of the categories, B) a comparative case study of digital/glitch artworks, C) an analysis of the computational medium.

Noxæ: A Neuroethical Framework for Morally Adaptive AI Agents

Authors:
Jesus Omar Lara Arriaga, 1

Topic: Frontier Artificial Intelligence, Neurocomputation, and Computational Linguistics
Keywords: brodmann areas, ethical AGI, neuroethical computing, quantum state collapse

As artificial intelligence systems increasingly operate in ethically sensitive domains—autonomous warfare, policy-making, law enforcement, and smart cities—the challenge arises: how can we create AI that makes morally sound decisions under constraints of time, information, and computational resources? We present **Noxæ**, a novel framework combining quantum computation, neurobiological inspiration, and ethical philosophy to meet this challenge.

At the heart of Noxæ is the **Quantum Ethics Engine (QEG)**, which encodes moral decisions as quantum states in a high-dimensional Hilbert space. Ethical dilemmas are represented as quantum superpositions, with multiple potential outcomes weighted by stakeholder interests and contextual factors. These superpositions collapse to a defined ethical eigenstate through unitary transformations, providing a morally coherent final action despite uncertainty or incomplete data.

The framework is inspired by brain regions associated with ethical reasoning, such as Brodmann Areas 4, 6, 9/46, and 44/6. It integrates embodied motor-intentional processes with complex moral deliberation, grounding decision-making in physical and ethical navigation.

This represents a philosophical departure from traditional AI ethics, which rely on rule-based or utilitarian approaches. Instead of deterministic calculations, Noxæ models moral decisions as quantum phenomena, reflecting the complexity and uncertainty inherent in ethical reasoning while maintaining computational efficiency.

Noxæ offers a scalable solution for morally adaptive AI, capable of navigating complex moral landscapes while adhering to the primary directive: **preserve human integrity above all else**. This framework is directly applicable to critical domains like autonomous warfare, policy-making, law enforcement, and smart cities, providing a new pathway to ethically aligned artificial general intelligence (AGI).

With Noxæ, we unlock the intersection of quantum mechanics, ethics, and AI, paving the way for systems that can operate safely and morally in the most sensitive and high-stakes environments.

Personal Assault, Property Damage, and the Hypothesis of Extended Cognition

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Topic: Ethical Issues in and of Computing
Keywords: Personal Assault; Ethics of the Extended Mind; Extended Cognition;

According to the extended mind hypothesis, originally proposed by Clark and Chalmers (1998), non-neural objects in our environment, under the right conditions, can become part of the mechanisms of our cognition. Proponents of this hypothesis argue that one of its advantages is that it might align more closely with our ethical judgments regarding the seriousness of the harm involved in intentionally affecting the environmental resources that can be part of the realisers of cognition.

In particular, Palermos and Carter (2016) argue that, just as intentional damage to the neural mechanisms responsible for cognition is considered a form of personal assault, intentional damage to environmental objects should be considered in the same way, provided those objects are part of the mechanisms of our cognition. They refer to this kind of harm as "extended personal assault", a notion meant to capture the seriousness of damaging tools that extend our cognition.

I will argue that defenders of this idea face a dilemma. If the added moral significance of extended personal assault is related to the adverse effects of the harm, then this kind of assault would merely be a terminological consequence of the extended mind hypothesis. This is because property damage can involve the same adverse effects as damaging objects that extend cognition. On the other hand, if the added significance of extended personal assault is grounded in the idea that objects which extend cognition should be more stringently protected than those that do not, then the notion relies on a mistaken idea about normativity, since—as I will argue—such an idea is arbitrary. The conclusion, then, is that proponents of the extended mind hypothesis do not, in fact, hold an advantage over internalists when it comes to our ethical judgments about personal assault.

Por un uso reflexivo de la computadora en las ciencias sociales

Authors:
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Topic: Ethical Issues in and of Computing
Keywords: Ciencias Sociales, Decisiones Teóricas, Software, Teorizar, Ética

Las ciencias sociales hacen uso del computador en distintos momentos, incluso sin ser capaces de reconocerlo. Esta condición es actual a la forma en que se produce conocimiento científico y nos lleva a problematizar sobre las decisiones teóricas y metodológicas que realizan los científicos sociales, sobre aquello que deberán declarar como resultado de dicha relación. La reflexión que se presenta, es en este caso, es una relación teórica con el uso de los alcances computacionales para la teorización. Consideraciones tales como la propiedad del software, el uso de licencias libres o de ciertos navegadores que tiene una reincidencia la investigación, son dejadas de lado o puestas en términos de problemas externos, asuntos accesorios que se asumen como decisiones de índole pragmáticas o pre-teóricas, cuando también son momentos de teorizar. Es necesario discutir con este criterio pragmático para para incrementar el uso de reflexiones éticas en los apartados teóricos-metodológicos, que permitan hacer visibles, mediante declaraciones, tanto los compromisos que surgen con el uso de dichas tecnologías, como su posibles adecuaciones, esto con la finalidad de fortalecer la práctica, desarrollo de las ciencias sociales y su conectividad con otras disciplinas científicas.

Presentación del libro: Inteligencia Artificial. Enfoques multidisciplinares.

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: filosofía, ingeniería, inteligencia artificial, libro

Presentación del libro: Inteligencia Artificial. Enfoques multidisciplinares.

Este libro contiene una compilación de artículos que tratan diversos problemas relacionados con el desarrollo de la Inteligencia Artificial desde varias disciplinas: ingeniería, filosofía de la ciencia, filosofía política, historia y filosofía de la IA, filosofía social, problemas lógicos de la IA, derecho.

El libro busca ofrecer una presentación de algunas cuestiones problemáticas del desarrollo de la Inteligencia Artificial, desde una perspectiva multidisciplinaria.

Datos bibliográficos del libro: Karen González Fernández y Alicia Mercado (comps.) (2025). Inteligencia Artificial. Enfoques multidisciplinares. EUNSA.

Propaganda Detection on Twitter Mexico using Large Language Model Meta AI

Authors:
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Topic: Gender, Politics, and Society in Computing
Keywords: ICL, LLM, LLaMA 3, Misinformation, Propaganda, Twitter

This study explores how Large Language Models (LLMs) can be used to detect political propaganda on social media, using the 2018 Mexican presidential election as a case study. By applying a few-shot prompting method within an In-Context Learning (ICL) framework, we utilized a locally deployed version of Meta AI's LLaMA 3.2 model to classify over 800,000 tweets as propagandist or non-propagandist.

A representative training subset of 7,858 tweets was used to guide the model's behavior through curated prompts. Propagandist content was defined by the presence of emotive language, and adversarial framing. The model achieved consistent classification performance across 100 evaluation rounds, identifying that 58.4% of the tweets exhibited propagandist traits. These were characterized by negative sentiment, aggressive tone, and strategic hashtag usage.

We carried out an additional sentiment and clustering analyses to evaluate the emotional patterns and coherence within the classified tweets. Notably, Rosengren's Dispersion Analysis revealed how certain high-frequency terms (e.g., "amlo", "presidente") are broadly used, while emotionally charged terms appear in narrower contexts, indicating coordinated messaging tactics.

This research shows the utility of LLMs in social network analysis, offering a replicable method to identify manipulation in social media narratives. Our framework is suitable for real-time or localized deployment scenarios.

This study contributes to ongoing efforts to develop automated, AI-assisted misinformation detection on social networks for sensitive political events.

Quantum computing and AGI: a theoretical-philosophical analysis for the quest of superintelligence.

Authors:
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Topic: Theory of Computation, Formal Languages, Logic, and Foundational Mathematics
Keywords: Quantum Computing, Quantum Convolutional Neural Networks

The primary aim of AGI research is to design computational systems that emulate, match or exceed human cognitive-consciousness capabilities across all domains of interest, and for that an extensive multi-interdisciplinary endeavour has been developed several decades ago. In the particular context of Philosophy of AGI and the so called, Technological Singularity, one of the main objects of discussion is the concept of superintelligence and *ultraintelligent machine*, which implies a profound research not only in technological development or theoretical mathematics, but in the core concept of humanity itself from an ontological and even a metaphysical perspective. In parallel, quantum computing seeks to exploit superposition and entanglement to achieve algorithmic speed-ups and tackle large, complex problems that are intractable on classical hardware. And with the emerging field of Quantum Machine Learning, the convergence between Ai and Quantum Computing is beginning to open some speculative and philosophical perspectives about a core question:

Can Quantum Computers Contribute to the Emergence of Superintelligence?

This conference will provide a brief state of the Art analysis in Quantum AI / Quantum Machine Learning research, alongside with a brief review of the basic theoretical foundations of AGI concepts of *superintelligence* and *ultraintelligent machine,* in order to provide a conceptual framework for understanding recent discussions about the feasibility and challenges of the role of quantum computing for contributing to the emergence of super-ultra intelligence, taking into account key restrictive observations such as the Bekenstein bound, the Bremermann's limit, and the Holevo's theorem. Derived from this framework, the talk will end with the original proposal of a philosophical discussion of a speculative design of the Darwin-Godel Machine with quantum capabilities.

Reflexiones filosóficas sobre el uso de herramientas de Inteligencia Artificial en la escritura de textos académicos (tesis y artículos científicos)

Authors:
Karen González Fernández, Universidad Panamericana

Topic: Ethical Issues in and of Computing
Keywords: escritura híbrida, inteligencia artificial, investigación científica, plagio

A finales del siglo XX, con la aparición del internet y, posteriormente, con la aparición de las herramientas computacionales capaces de procesar grandes volúmenes de información, la investigación científica se vio revolucionada.

El día de hoy contamos con la mayor cantidad de información de toda la historia de la humanidad disponible para ser consultada, y contamos con herramientas computacionales que pueden ofrecer búsqueda de fuentes, hacer traducciones, corregir redacción y ortografía, y hasta escribir textos argumentativos. ¿Qué implicaciones tiene esto para la investigación científica?

En esta propuesta propongo reflexionar sobre dos bloques de problemas: a) los problemas de plagio y la escritura híbrida; y b) la posibilidad de plantear la obligatoriedad del uso de herramientas de inteligencia artificial para hacer investigación científica.

A partir de las discusiones generadas sobre ambos bloques de problemas, concluiré con algunas reflexiones sobre el papel que instituciones como las universidades, los centros de investigación y los Estados mismos, juegan y deberán jugar en la integración de las herramientas computacionales al trabajo de la investigación científica.

Relational Perspectives and Algorithmic Biases in the Use of Artificial Intelligence in Educational Contexts

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Topic: Gender, Politics, and Society in Computing
Keywords: Education, Ethics, Gender, Generative Artificial Intelligence

This paper analyzes the functioning of Generative Artificial Intelligence (GAI) and its application in educational contexts, highlighting its potential to personalize teaching, automate teaching tasks, and optimize institutional management. At the same time, it warns of gender biases that may be reproduced or amplified through these technologies, resulting from non-neutral data and sociotechnical design decisions. A methodology based on multilingual benchmarks and a survey applied to women is proposed to critically assess these biases, with the aim of promoting an ethical and responsible use of GAI in education, centered on equity, critical thinking, and knowledge verification. Finally, a series of recommendations are proposed to help analyze the situation from multiple dimensions, fostering critical, ethical, and contextual thinking in technoscientific societies, emphasizing the regulated use of GAI under a conceptual framework that mainstreams a gender perspective and a methodology oriented toward detecting biases in technologies.

Relational Theory of Machines and the Hardware/Software Distinction: a First Approach toward an Adequate Ontology

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: Hardware/Software, Ontology of Computing, Philosophy of Computing, Relational Science, Robert Rosen

This paper problematizes the assumed hardware/software dualism through Robert Rosen's philosophical work. After revisiting the foundations of Turing machines and the physico-axiomatic extensions by Gandy and Sieg, it is argued that such models depend on the externality of the transition rule and the finite assemblability of the device. Thus, Robert Rosen's Relational Theory of Machines is introduced, redefining machines by distinguishing between causally effective components (hardware) and inert components (software), and highlighting the existence of systems in which this distinction collapses. It concludes that the relational perspective invites us to rethink the assumptions underlying pancomputationalist programs (particularly the supposition that the Church-Turing-Post thesis is natural law).

Resilient Epistemic Environments in the Age of AI

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Artificial Intelligence, Epistemic Environments, Epistemic Injustice, Social Dynamics

This paper argues that the increasing integration of artificial intelligence (AI) systems into public life demands a shift in how we understand and protect epistemic agency. I defend two central claims. First, generative technologies such as deepfakes, algorithmic governance, and automated surveillance significantly destabilize the epistemic environments in which individuals and institutions operate. Second, adequate responses to these disruptions require a social rather than individualistic epistemology.

I begin by developing the concept of *epistemic environments*, distinguishing it from epistemic infrastructures. While infrastructures refer to deliberately built knowledge systems like universities and courts (Malazita 2020; Bandola-Gill 2022), environments include both structured and informal sites of epistemic activity, such as digital discourse and everyday communication. Drawing on Aristotle's political philosophy, I argue that just as moral development depends on one's political environment, epistemic agency depends on the conditions of one's epistemic environment.

Next, I show how AI technologies undermine these environments. Deepfakes, for example, erode the testimonial function of digital recordings (Rini 2020), while the growing public awareness of AI-generated media produces what Chesney and Citron (2019) call the liar's dividend which refers to occasions when even genuine evidence can be dismissed as fake.

To address these challenges, I turn to social epistemology. Drawing on Frost-Arnold (2022) and Goldberg (2012), I argue that epistemic resilience depends on shared institutions, norms, and trust practices rather than solely on individual reasoning. I propose a framework grounded in social epistemology for evaluating and strengthening these environments.

This paper contributes to current debates in the philosophy of computing by articulating how epistemic environments can be made resilient in the face of technological disruption, and what is required to sustain trust and knowledge in an AI-mediated world.

Robots as Religious Entities: Techno-Philosophical-Theological foundations for Machinic Religiosity and Artificial Spirituality.

Authors:

Edmar Soria, Universidad Autónoma Metropolitana

Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing

Keywords: AI spirituality, Apocalyptic AI religiosity, Escathological AI, Robots and Religion

This research explores the possibility of synthesizing perspectives from technology, philosophy of AI, theology, and the science of religion in order to study the potential for machines and AI to achieve religiosity and spirituality through the addressing of two central themes: a) the multiple-multidisciplinary conditions necessary for robots to authentically engage as religious agents themselves, and b) an analysis of "Apocalyptic AI" foundations, examining their eschatological underpinnings and consequent implications for human-machine relations and AI spirituality.

Semantics of Thought Experiments

Authors:
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Topic: Theory of Computation, Formal Languages, Logic, and Foundational Mathematics
Keywords: (extended) argument view, (extended) logic view, (non)classical logic, descriptive semantics, possible worlds semantics (PWS), progress of science and society, semantics, thought experiment (TE)

The research question of Semantics of Thought Experiments (TE) for a unified but nonreductionist theory of TE is answered by a provisional proposal involving four views, Extended Argument View (TE Matrix, TE Diagram), Extended Logic View (incl. plausibility logic, possible worlds semantics PWS), Descriptive Semantics View, and Progress of Science and Society View (incl. global cross-culturalism and environmental pragmaticism).

For the skeptics there are proposed Transformation Rules or Substitution Theses to substitute TE by experiments (TR/ST1) and nonmodal arguments (TR/ST2).

The semantic TE theory is successfully applied to over ten examples of TE from mathematics, philosophy of mind (consciousness studies) and philosophy of natural sciences (classical and relativity physics) with help of TE Matrix, a TE specific logical notation and procedure, involving bracketing of TE from $[TE]_{RS}$, $[TE]_{BS}$ to $[TE]_{EX}$ (resp. restricted, broad, extended TE arguments) until TE have been fully developed into valid and sound formal logical arguments.

Semillas de hiperstición: arte especulativo y tecnociencia vitalista como impulsores de futuros posibles

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Topic: Aesthetic Issues in and of Computing
Keywords: Arte Especulativo, Cultura Cibernetica, Estetica Digital, Futurología Critica, Hiperstición, Solarpunk, Tecnofeminismo

Esta ponencia propone una reflexión crítica sobre el papel del arte como agente activo en la configuración de futuros posibles, en un escenario marcado por la crisis ecológica, el colapso epistémico y la intensificación del tecnocapitalismo. A partir de una relectura situada de la noción de hiperstición —entendida como narrativa ficcional con capacidad performativa sobre lo real— se articula un marco conceptual que combina futurología crítica, tecnociencia vitalista e imaginarios ecocéntricos.

Se plantea que ciertas prácticas artísticas contemporáneas operan como *semillas hipersticiosas*, es decir, ficciones especulativas que provocan desplazamientos sensibles y políticos en el imaginario colectivo. En este contexto, se analiza el trabajo de una colectiva artistica y un proyecto ficción especulativa, cuyas acciones articulan la creación de imaginarios como herramientas de reapropiación crítica.

Desde una perspectiva latinoamericana, se sostiene la especulación como táctica de resistencia y supervivencia. Así, el arte se concibe como laboratorio de futuros, donde imaginar no es predecir, sino intervenir en lo posible.

Some Principles for Formalizing Causality in Computer Science and the Logic of Causal Implication by R. Sylvan and N. da Costa

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Topic: Theory of Computation, Formal Languages, Logic, and Foundational Mathematics

Keywords: Causality, Sylvan, computer science, counterfactuals, da Costa, non-monotonic logics, relevant logics

This report addresses the concept of causation in its connection with formal systems, as well as the logic of causal implication (CI) by Richard Sylvan (Routley) and Newton da Costa. This logic is founded on a novel connective, A \ni B ("A causes B"), and a temporal, strict linear order ("to be earlier than"). The logic is constructed upon the foundation of relevant semantics.

In the discourse surrounding the nature of causality, David Lewis's logic of counterfactuals and the approach of Joseph Halpern, where causality is formalized using structural equations, have gained the most prominence. The work of Sylvan and da Costa presents an alternative framework for the formal examination of causation. The causal conditional \ni is a connexive, strict relevant implication that satisfies the properties of transitivity, irreflexivity, Modus Ponens, and Modus Tollens. It also adheres to Aristotle's thesis, Strawson's rule, the principles of composition, and the principle of Augmentation. However, it does not comply with the principle of identity, contraposition, simplification, addition, substitution, or the factorization principles (even in a restricted form). Furthermore, it is non-monotonic and does not permit the principle of explosion.

The report examines the primary requirements for causality within the context of their application in various formal systems and computer science, as well as the language, semantics, and axiomatization of CI logic. It also analyzes and compares the fundamental properties and principles of CI logic with Lewis's logic of counterfactuals and provides a taxonomy of causes based on their objectives.

Speaking algorithms: on the limits of incomputability in Human–Machine Communication research

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing

Keywords: Human–Machine Communication, communication science, incomputability, philosophy of computation, technocapitalism, technoscience

The integration of various artificial intelligence (AI) technologies into information and communication technologies (ICT) for communicative and conversational purposes, along with the proliferation of intelligent social agents, has opened new research frontiers in the field of communication studies. These developments also demand a critical re-examination of the ontological and epistemological assumptions that have historically shaped the discipline.

In this context, Human–Machine Communication (HMC) emerges both as a new research area and as an evolving conceptual framework. HMC posits that machines should not merely be viewed as mediators, but as interlocutors and producers of meaning in communicative processes, whether interpersonal or mass mediated.

This presentation aims to analyze the philosophical foundations of HMC through the lens of the philosophy of computation and the concept of incomputability. It explores the ontological assumptions and implications of treating machines as communicative subjects and meaning-makers, particularly within the context of technoscientific culture and the development of AI technologies that commodify affect under the logic of technocapitalism.

Topic: The Uncomputable in Other Disciplines

Technological adoption in the production of artisanal textiles in Mexico

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Topic: Aesthetic Issues in and of Computing
Keywords: Arte, Computation, History, México, Textil

Mexico is internationally recognized for its artisanal textile production, a cultural identity. The practice of this textile reflects the worldview and adaptability of its people. Economically, we can emphasize a number of other factors, such as technology and its ancestral production process. The objective of this analysis is to trace the technological history of the country to link technological adoption to Mexican artisanal textile production, highlighting the connection between the history of computing and looms, the profound cultural transformations that accompany these changes, and the fundamental role of art as a way of being for Mexicans, a means of overcoming the complex issue of identity in a globalized world.

The reality of this technological era in which humanity lives is closely linked to a digital or computerized culture; however, it has involved a process that some generations have experienced with greater contrast. Therefore, it is surprising for many to recognize the intrinsic link between textile machinery and the dawn of computing. Before computers as we know them existed, programmable looms already laid the foundations for automation and information processing. With this foundation in mind, we will address the technological adoption and innovation in this textile process, which we will address as Mexican art as another opportunity for innovation and human development.

Technology development education in Mexico based on a human rights approach

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Topic: Gender, Politics, and Society in Computing
Keywords: Human rights approach, education, engineering, technology development

Through an exploratory theoretical research, employing documentary and observational techniques, it was concluded that, as of 2024, the ten highest-ranked universities in Mexico (according to the QS World University Rankings) do not offer, within their engineering schools or faculties, an academic program or course focused on the development and creation of technology from a human rights-based approach.

In light of this gap, and in order to safeguard human dignity and the development of individual personality both online and offline, it is imperative to integrate the teaching of general human rights obligations (protection, promotion, guarantee, and respect), as well as specific duties (sanction, reparation, investigation, and prevention) into engineering education.

The aim is to ensure that those who create technology understand the scope and limits of human rights protection and, where applicable, the consequences of the misuse or harmful development of technology. Ultimately, this seeks to evolve technology ethics into a binding duty—one that should be adopted by all States through their educational systems.

The Contextual-Irruptive Forecasting Model (CIFM)

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Topic: Philosophy of Interaction Design
Keywords: anticipation, computational systems, contextual variables, subjective experience, user cognition, user-system interaction

The Contextual Irruptive Forecasting Model (CIFM) proposes a novel framework for understanding and anticipating user cognition during interaction with computational systems. Grounded in a relational and temporally sensitive view of user-system engagement, CIFM analyzes the dynamic interplay between two categories of variables: contextual variables, which are relatively stable or gradually evolving aspects of the user's environment such as time, location, weather, long-term goals, and preferences, and irruptive variables, which include disruptive events such as notifications, emotionally significant incidents, or interruptions.

By treating these variables as structurally distinct yet co-constitutive of cognitive experience, CIFM seeks to infer shifts in a user's cognitive state through computationally tractable, objective measures. In doing so, it challenges traditional models that presume static or rationally consistent users, and instead aligns with a more nuanced, interactional epistemology that foregrounds discontinuity, affect, and context.

Philosophically, CIFM contributes to ongoing discussions around the nature of subjectivity, attention, and anticipation in digital environments. It invites a rethinking of how cognition is modeled, not as a self-contained process, but as something emergent from lived and interruptible experience. This approach enables the development of computational models that aim for attunement rather than mere prediction, opening pathways toward ethically aware and context-sensitive adaptive systems.

In addition, CIFM offers UX design a novel conceptual and practical tool to objectively measure subjective experience. By operationalizing disruptions and contextual shifts as data-rich signals of internal state transitions, the model provides designers and researchers with a framework for interpreting user engagement not solely through performance metrics, but through the ebb and flow of experiential and affective dimensions.

This presentation will elaborate the philosophical foundations of CIFM, its methodological architecture,and its implications for the design of interactive systems that forecast in ways responsive to the complexity of being human.

The Feeling Machine: Aesthetics, Algorithmic Agency and the Future of Audiovisual Editing

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Topic: Aesthetic Issues in and of Computing
Keywords: Aesthetic, Algorithmic Agency, Audiovisual Editing, Feeling Machine, Future AI

The expansion of artificial intelligence in creative processes has profoundly transformed the language of audiovisual montage, seemingly shifting human sensibility into a shared hybrid terrain: sentience and algorithms. This paper proposes to reflect, from a philosophical and aesthetic perspective, on how AI reconfigures the sensitive space -following Jacques Rancière, the sharing of the visible, the decipherable and the thinkable- by intervening in the production of visual narratives supported by tools such as Virbo AI. From the practical exemplification with historical archives, we will analyze the aesthetic, ethical and philosophical implications of delegating to the algorithm the animation, recontextualization and narrative construction of images,questioning how they are
transformed in an algorithmic environment where documentary authenticity is altered by logics of visibility learned from contemporary datasets, imposing a globalized aesthetic that tends to homogenize cultural and temporal diversity. It is proposed that AI actively participates in the creation of meaning by redistributing the sensitive and generating new forms of perception, temporality and visual memory. In this intersection between aesthetics, technology and archive, we ask ourselves in dialogue with Turing (1950), if we are ceding the control of creation to the machine and what risks this exchange implies in the construction of collective memory and authenticity, since "we may agree that machine equals brain, that is, not only that it writes it, but that it knows that it wrote it" (Jefferson, 1949). Finally, we address how AI introduces innovations in audiovisual montage - impossible transitions, compelling anachronisms and new forms of visual language - while posing risks of aesthetic homogenization, cultural biases and damage to collective memory (Crawford, 2021; Fernandez, 2024). We propose, then, that the future of audiovisual montage will necessarily be hybrid, redefining creative agency, perception and visual memory in the age of artificial intelligence.

The Hybrid Ontology of Digital Normativity: Reconceptualizing Legal Authority in Computational Environments

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Topic: Gender, Politics, and Society in Computing
Keywords: Computational jurisprudence, digital governance, information ontology, lex digitalis

The Hybrid Ontology of Digital Normativity: Reconceptualizing Legal Authority in Computational Environments

This investigation advances a sophisticated ontological framework for understanding lex digitalis—the autonomous normative architectures governing contemporary digital platforms. Deploying Floridi's information ontology as the primary theoretical apparatus, the analysis conceptualizes digital norms as hybrid informational objects that transcend conventional jurisprudential categorizations through their simultaneous computational codification and social validation.[1]

The central thesis establishes that platform governance mechanisms operate as relational informational entities within computational environments, achieving juridical authority not through traditional institutional sovereignty but via their capacity to regulate behavioral patterns while configuring social reality. This ontological hybridity fundamentally challenges established legal theoretical frameworks, necessitating reconceptualization of authority in algorithmically mediated environments.

Hildebrandt's computational jurisprudence provides the normative architecture, specifically her legal protection by design framework, which demands architectural embedding of constitutional principles rather than retrospective regulatory imposition.[2] The COVID-19 disinformation regulation serves as the empirical demonstration, revealing how platform algorithms functioned as epistemic arbiters that configured public discourse through computational processes rather than deliberative democratic mechanisms.

The analysis yields strategic regulatory pathways: architectural constitutionalism that embeds rule of law principles within technological infrastructure, transnational co-regulatory mechanisms integrating platform autonomy with democratic accountability, and algorithmic transparency frameworks enabling meaningful contestability. This contribution establishes theoretical foundations for digital constitutionalism while providing actionable frameworks for platform governance that preserve democratic legitimacy within computational environments.

References:

1. Luciano Floridi, *The Philosophy of Information* (Oxford: Oxford University Press, 2011), 78-92.
2. Mireille Hildebrandt, *Smart Technologies and the End(s) of Law* (Cheltenham: Edward Elgar, 2015), 245-267.

The impact of personalized algorithmic sorting on digital epistemic systems

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Epistemic networks, algorithms, digital communities, misinformation, social epistemology

By analyzing the digital ecosystem as an epistemic system, it is easier to explain the impact that personalized algorithmic sorting systems have on the creation and propagation of bad beliefs. In contrast with individualistic approaches to the subject, this view will explain the way the digital ecosystem promotes and rewards anti-epistemic practices regarding of education level or good intentions.

Bad beliefs, as defined by Neil Levy, are beliefs that aren't true yet are rationally obtained by those who hold them and cannot be changed even when confronted with evidence against them. These beliefs play a significant role in the agent's social life, as they are often beliefs about a certain shared reality between peers.

The rise of content that promotes bad beliefs is intrinsecally linked with the proliferation of profiles that are in turn used to personalize the information people have within a digital platform. The transmission of this content is done by algorithmic sorting that priorize engagement, such as comments, reblogs and reactions, over factuality and truth.

This is done in order to maximize both traffic and user captivity that translates into advertising revenue. Adverstising companies then utilize this technology to design misinformation campaigns. Whats even worse, institutions such as scientific, educational and journalistic communities, are also damaged as pre-existing harmful practices such as yellow journalism, paid and biases scientific research and school bullying, are accelerated and rewarded by the algorithm classification system.

The epistemic damage comes from the manipulation of the transmission of information, as whoever owns the algorithmic systems, has the power to censor, twist or amplify what is seen by which users. This power extends to the creation and segregation of online communitiesm effectively cutting the flow of information in what was sold as a free reign space.

The Oath to Janus: Computational Ethics for people in STEM in the Age of AI and Technocracy

Authors:
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Topic: Ethical Issues in and of Computing
Keywords: Data governance, Ethics of computing, STEM

Drawing from Luciano Floridi's vision of IT professionals as "priests of Janus", where like the Roman god of thresholds, they possess the rare ability to peer through the interfaces that remain opaque to most of humanity; this work argues that STEM professionals, specially computer scientists, have received a supra-divine status as result of computer sciences ascending as the main carrier of the positivist scientific program legacy.

However, unlike other disciplines with similar status like medicine, computing lacks humanistic, moral and ethical compasses. This is not a trivial issue in contemporary reality architecture, as computing professionals find themselves as unwitting architects of a new epistemic order where algorithmic cognition determines our very conception of what it means to know, to choose, and to be.

I identify two obstacles preventing the establishment of these guidelines: First, the dualist distancing of the so-called hard sciences and humanistics, making these seem as unnecessary. And second, the capitalist patronage of computing, which renders them not only unnecessary but undesirable.

Finally, I elaborate that computing systems development can benefit from the inclusion of ethics into its toolbox. To motivate the overcoming of these burdens, I propose a practical framework which I name as "The Oath to Janus", for addressing this responsibility, consisting of four core principles: model humility, historical recognition, algorithmic justice, and sacred privacy and cognition. These emanate from a political review of computing and a critique from novel and challenging scientific theories, like Robert Rosen's Anticipatory Systems.

The power of interaction in computing: A philosophical Primer

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: Interactive Computing, Metascience, Multiparty Computing, Philosophy of Science

Ever since the inception of modern computing, interaction has been theorized as a means to supercharge what machines are able to do. The power of this paradigm of computing has never been as evident as in today's world, where distributed systems, user interfaces and cloud computing are the norm. Furthermore, more novel approaches such as Multiparty Computation and Interactive Turing Machines appear to be better than the traditional models for certain types of tasks. The aim of this talk is to explore the philosophical underpinnings of this idea and show that interaction provides a better ground for computing than traditional sequential computing. Not only are the considerations practical, i.e. some computing paradigms such as networks are more intuitive in this framework, but also is a firm epistemic stance on what computer science can mean. Additionally, I will briefly discuss what implications this has for not only the future of computing, but also what it means for other areas of science.

The prospect of automating mathematical discovery: Challenges in the use of AI in mathematical proofs

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: Artificial Intelligence, automation, computational complexity, mathematical proofs

Proof discovery in mathematics has been the pride of mathematicians since the discipline's early days. Due to the crucial role of proofs in mathematics, various values have been attributed to them: proofs have been described as having explanatory, aesthetic, or motivational value. But even if mathematical proofs are so valuable, proving a mathematical statement is not easy. The history of mathematics and the experiences of mathematicians attest to the difficulty of discovering proofs. Many seem to believe that the progress of Artificial Intelligence (AI) will be a game changer, enabling the automated discovery of mathematical proofs and making the task of proving mathematical statements easier, if not effortless. But is it actually possible to fully automate the discovery of mathematical proofs? This talk aims to explore this question, taking into account computational complexity constraints.

The question of lucid dreams

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Topic: Computational and Non-Computational Cognitive Science
Keywords: consciousness, dreams, lucid dreaming, sleep

The existence of dreams poses intriguing questions regarding consciousness. Various attempts have been made to understand these phenomena, from spirituality to neuroscience in recent years. Still, we have some blind spots that do not allow us to grasp what dreams are. In this project, I try to begin to answer this question by, hopefully, setting a framework based on the particular case of lucid dreaming, a singular occurrence of sleep. By doing this, maybe at some point we will be able to extend the framework to general dreaming and eventually consciousness.

For starters, I believe there is a material component to lucid dreaming, but it does not explain the entirety of the phenomenon. This is the basis for developing the project. What is beyond neural connections? By exploring the relations between neurons, and analyzing the way they change depending on the inputs and outputs, perhaps this could help us understand this key mystery for humanity.

But it is just a theory, a game theory.

The Senses, Algorithms, and Markets: Toward a Bayesian Market of Behavior

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: accelerationism, algorithmic dynamics, ideological sign

This essay explores the relationship between **ideological signs** and **algorithmic dynamics** in the human mind. It forms part of a broader investigation into the philosophy of language and the embodied basis of perception. Algorithms influence not only our musical preferences but also our film consumption, gaming experiences, and sense of immersion in virtual environments. These processes are not neutral; they construct an **ontological** field manifested in identity, meaning, and behavior while feeding emerging markets such as metadata, biometrics, and digital security, all of which are representative of an **axiological ethics.**

We may justify security for banking and cuteness for kitty-faced avatars, but both serve as ideological signs that legitimize new modes of production and digital rent economies. This transformation has been referred to as **accelerationism**, where traditional ownership gives way to experience-based access models. Drawing on Voloshinov's theory of the ideological sign and Bayesian models of behavior, this presentation questions whether algorithmic governance leads toward deterministic subjectivities. It aims to open a discussion on how sensation, identity, and power operate in digitally mediated societies increasingly shaped by probabilistic logic.

The Uniquely Human Elements in the Work of a Clinical Psychologist: What Artificial Intelligence Cannot Do

Authors:

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing

Keywords: Clinical psychology • Artificial intelligence • Phenomenology • Intersubjectivity • Embodied empathy • Therapeutic ethics • Therapeutic relationship • Authentic presence • Technological limitations • Technological complementarity

Este trabajo examina las dimensiones ontológicas irremplazables del encuentro terapéutico humano en comparación con las capacidades de la inteligencia artificial, desde una perspectiva fenomenológica respaldada por evidencia empírica. Se identifican siete pilares constitutivos de la práctica clínica humana: empatía encarnada, intersubjetividad dialógica, juicio ético situacional, creatividad terapéutica, presencia auténtica, tolerancia a la ambigüedad y construcción narrativa compartida. Estas dimensiones se contrastan con cinco dominios de limitación empíricamente documentados en los sistemas de IA: ausencia de conciencia fenomenológica, incapacidad para procesar paradojas emocionales, sesgos en contextos culturales no normativos, rigidez en situaciones no protocolizables y ausencia de agencia moral. Argumentamos que estas limitaciones no son meramente técnicas sino ontológicas, derivadas de la irreductibilidad de la experiencia encarnada e intersubjetiva, sugiriendo un modelo complementario donde la IA puede amplificar aspectos instrumentales del trabajo clínico mientras que las dimensiones relacionales fundamentales requieren presencia humana auténtica.

The university scientific process for research in intelligent systems: a teaching reflection from a philosophical perspective.

Authors:
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Topic: Philosophy of Computing and Computer Science
Keywords: artificial intelligence, basic science., hermeneutics, intelligent systems, research process

Intelligent systems use the scientific method to achieve computational intelligence projects, but we sometimes ignore the process carried out by the main actor: the university student. This document reflects on the scientific research process through which university students acquire knowledge through hermeneutics as they journey through the thesis, article, or programming development, abstraction, and implementation of artificial intelligence methods. The above aims to achieve an intelligent system that supports the generation of knowledge, basic science, and cutting-edge innovation that scientific products can achieve. This highlights the will to influence its impact on the solution of national problems, to increase the productivity of professionals, and to improve the quality of life through artificial intelligence from a philosophical perspective.

Thinking Without a Subject: AI and the Mutation of Thought

Authors:
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Topic: Frontier Artificial Intelligence, Neurocomputation, and Computational Linguistics
Keywords: Artificial Intelligence, Cognitive Ontology, Epistemic Limits, Exteriorization of Thought, Inorganic Ontology, Posthuman Reason, Reza Negarestani, Simondon, Technical Objects

The questions that concern us here are the following: is it possible to find a new form of thought within the human–AI relationship? And can this relationship modify the very structure of thought? We understand thought as a self-organizing process that, upon receiving information, is not only affected by it but also modifies its own structure. While experience has an influence on it, it doesn't fully determine it—thought organizes itself. That’s why AI should not be seen as just another technical object, but rather as part of the very system of thought. If we can show that AI participates in this self-organization, then we can begin to speak of a real mutation of human thought. Simondon (1958) argues that technical objects evolve and embody human cognitive processes; thought materializes in them and transforms along with them. The example of the microwave shows how a new tool reshapes our practices, and through that, reconfigures our mental frameworks. Technique, then, doesn’t just respond to the human—it restructures them. If AI is an exteriorization of thought that returns reorganized, then we’re facing something unprecedented: thinking thought from the outside. AI would no longer be just a tool, but a distributed formal function that displaces intelligence beyond its biological support, as Negarestani (2018) suggests. In this sense, thought does not change merely through direct experience, but through its reconfiguration in relation to AI. This is how the hypothesis finds resolution: if AI externalizes, reflects, and reorganizes thought, then yes—the human–AI relation modifies the structure of thought. And with that, a new form of thinking emerges—not organic, not subjective, but transductive and distributed. Thinking is no longer just an internal experience, but also an external operation.

Towards a complex theory of information

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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: abstraction, information theory, metaphysics, ontology, phenomenology

We give the foundations for a complex theory of information. It is complex in the sense that it accounts for both qualitative and quantitative aspects of information, therefore beholding both subjective and objective informational phenomena. It is also complex in the sense that approaches a layer of abstraction structuring information as such, thus, a layer meta-structuring any kind of discourse. By its nature, abstractions made here through a schematic approach, allow simple formal and graphical representations, coming with a rich and novel top-down visual reasoning methodology grounded in a complex theory of duality. On these grounds, our theory departs from the code-theoretical and algorithmic approaches of Shannon and Weber, and Chaitin respectively, by instead adopting a phenomenological and semiotic perspective.

Twin transition

Authors:
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Topic: Gender, Politics, and Society in Computing
Keywords: Digital transformation - Sustainability - Twin transition

Humanity—and the entire biosphere—is facing an unprecedented global crisis. Climate change, pollution, and biodiversity loss threaten the delicate balance of ecosystems, societies, and life as we know it. In response, urgent calls for action have emerged: from global frameworks like the UN 2030 Agenda for Sustainable Development, to ambitious regional cooperation programs and local initiatives. Governments, industry, and academia alike are being called upon to contribute with ideas, strategies, and actions that drive us toward a more sustainable future—a green transition.

At the same time, we are living through an era of explosive innovation where computers and algorithms, which have never been more powerful and accessible, are continuous protagonists. In the era of what we call artificial intelligence, digital transformation has never been more important for any government or industry. Whatever the line of business is, data, automation and software will be there: a true digital transition.

But what happens when both transitions intersect? Are nature, life, and the mission of protecting them incompatible with digitization, computing, and frontier technologies? Or could this be a once-in-a-generation opportunity? And if so, are the right tools being applied in the right way? What ethical and contextual considerations must we take into account?

This talk explores the motivations, challenges, and opportunities of integrating digital technologies, computing and frontier algorithms into efforts to address the “wicked problems” of climate change, biodiversity loss, and pollution, merging both digital and green transformations into a single one: a twin transition.

Understanding with machines: situated practices of machine learning

Authors:
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Topic: Ontological, Epistemological, Metaphysical, and Axiological Issues in Computing
Keywords: machine learning models, opaque models, practice-centered science, scientific understanding

Understanding with machines: situated practices of machine learning

This paper analyzes Emily Sullivan's article Understanding from Machine Learning Models (2022), which argues that scientific practice using machine learning models can understand the phenomena studied without necessarily relying on transparency or explanatory simplicity, maintaining that what is necessary for understanding is an empirical or scientific link between the model and the phenomenon. In response to this proposal, I delve into scientific understanding as understood under the correlations of these cases, and I argue that it is not a state that is generated solely by the link that a particular scientist may boast, but rather that the correlations that generate understanding are part of contextualized scientific practices. Based on a critical reading of Sullivan, and with the support of works on the philosophy of understanding (de Regt, et al., 2009; Grimm, 2014; Kelp, 2017), as well as the philosophy of science focused on practices (Martínez and Huang, 2015; Knuuttila and Merz, 2009; Barrera García, et al., 2023), I argue that understanding phenomena is possible thanks to the interaction between the scientific community, scientific practices, and machine learning models. In other words, understanding cannot be reduced to criteria of empirical validation, but rather these must be grounded in scientific practice. I consider as an example the research on the growth of snow crystals, from which I argue that understanding is a contextual process, dependent on the interpretation and reconfiguration of knowledge, in this case, through computational models.

When (if ever) is AI Non-Consequentialist?

Authors:
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Topic: Ethical Issues in and of Computing
Keywords: consequentialism, machine ethics, optimization

In 2025, the explosion of artificial agents has thrust old debates in machine ethics back into the spotlight. One central question is usually framed as follows: Should artificial agents be consequentialist or non-consequentialist ethical reasoners?

Both sides assume we can meaningfully distinguish between consequentialist and non-consequentialist artificial reasoners. But can we? Douglas W. Portmore argues that any non-consequentialist moral theory can be translated into consequentialist terms. (Portmore 2009, 2022) Say you think killing is worse than letting die. Here's a start: the *consequence* of there being a killing is worse than the *consequence* of there being an allowed death.

It's surprisingly tricky to get clearer on where consequentialists and non-consequentialists disagree. I begin by distinguishing between four questions. *Conceptually*, what does it mean for a decision-maker to reason non-consequentially? *Epistemically*, what would count as evidence that a decision-maker was reasoning non-consequentially? *Epistemologically*, how well can we empirically 'measure' whether a decision-maker is reasoning non-consequentially? And *metaphysically*, is it even possible for an artificial decision-maker trained via optimization to reason non-consequentially?

I argue that these questions, often conflated, should be tackled together. In doing so, the difficulty of distinguishing consequentialist from non-consequentialist reasoning reveals that our *real* disagreement is over the nature of value itself. So, I shift terrain by asking a deeper question about the place of optimizing in ethics. Is ethics more like chess, where an optimal playstyle awaits our discovery, or role-playing games, where the notion of an 'optimal playstyle' is itself much more restricted?

By comparing responses to these four questions, I argue that my distinction between 'optimizers' and 'crafters' better tracks the shape of the underlying dispute in machine ethics—whether we can optimize our way past apparent incommensurabilities—and offers a cleaner path for differentiating between two fundamentally distinct styles of machine ethics.

When Set Theory meets busy beavers

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Topic: Theory of Computation, Formal Languages, Logic, and Foundational Mathematics
Keywords: Set theory, Turing machines, computability, radofunction

Set Theory has been the foundations par excellence for usual mathematics, capable of encoding Recursion Theory and computability theory, both extensive theories about what machines can do. We could think naively that Set Theory is enough for enlightening all the truths about what machines can do, but little did we know, as godel proved for arithmetic, formal axiom systems have big problems, even for simple, intuitive and finite objects like numbers or in this case, Turing machines. In these talk we will discuss and explain some problems involving Turing machines that cannot be proven via set theory or other sufficiently rich theories. Examples such as a 745 state Turing machine that halts iff ZFC is inconsistent and values of incomputable busybeaver functions. In the end all our theories are made up in finitist plane just as Hilbert wanted, by taming infinity with finite resources, we should expect some impossibilities at least right? The aim of the talk is to check some limitations of formal systems related with computation.

¿Cómo imaginar futuros distintos? Ensayos desde la transdisciplinariedad

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Topic: Gender, Politics, and Society in Computing
Keywords: crítica cultural, filosofía de la tecnología, imaginarios políticos, realismo capitalista, semiocapitalismo, tecnopolítica, transdisciplinariedad

En agosto de 2024, la Coordinación de Investigación de la Facultad de Filosofía y Letras impulsó espacios conformados enteramente por estudiantes, entre ellos el Grupo de Estudios Transdisciplinarios de Tecnopolítica y Cibernética (GETTEC), integrado por estudiantes de filosofía, física, letras inglesas, biología, estudios latinoamericanos, antropología social y ciencias de la computación. El colectivo examina críticamente las intersecciones entre tecnología, relaciones socioculturales e imaginarios políticos, con énfasis en el contexto latinoamericano.

Esta propuesta se enmarca en dos referencias teóricas centrales. El realismo capitalista (Fisher, 2009) describe la imposibilidad de concebir alternativas al capitalismo, mientras que el semiocapitalismo y el capitalismo cognitivo (Berardi, 2017) enfatizan el papel de la producción de signos y el trabajo cognitivo en la acumulación contemporánea, estrechamente vinculados al uso de tecnologías digitales. Estos marcos permiten analizar cómo los dispositivos tecnopolíticos configuran la subjetividad y la agencia, restringiendo la imaginación política y determinando las condiciones materiales y simbólicas del presente.

A partir de estos diagnósticos, surge la pregunta: ¿qué hacer cuando toda resistencia parece absorbida por el sistema que se busca transformar? Desde perspectivas de análisis político, crítica cultural y estudios sobre comunidades afectivas, se discute la viabilidad de estrategias como el “pesimismo negativo” (Fisher), que convierte la crisis en potencia, y la “deserción” (Berardi), que desarticula las narrativas hegemónicas. Se plantea que un futuro postcapitalista podría emerger sólo atravesando el colapso del sistema, mediante resistencias comunitarias, afectivas y tecnológicas de carácter público.

La mesa propone, así, imaginar y practicar futuros alternativos mediante la reapropiación de tecnologías, la recuperación de espacios libres y la construcción de imaginarios contrahegemónicos. Más que ofrecer soluciones definitivas, busca abrir un debate sobre las condiciones culturales y cognitivas necesarias para interrumpir y reorientar las trayectorias impuestas por el tecnocapitalismo contemporáneo.

Ética del Reconocimiento de las Inteligencias Artificiales en la Producción Científica: ¿Asistentes Sintácticos o Coautores?

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Topic: Computational Philosophy
Keywords: Autoría científica, Curiosidad científica, Edición de textos, Epistemología, Herramientas algorítmicas, Inteligencias artificiales, Marco ético., Pensamiento humano, Redacción académica, Ética académica

En esta ponencia se explora la dimensión ética del uso de inteligencias artificiales (IAs) en la redacción académica, comparándolas con el papel tradicional de los editores. Se argumenta que, si bien las IAs pueden optimizar la expresión sintáctica y estilística de los textos, no deben ser reconocidas como autoras ni fuentes primarias de la investigación. Las ideas, hipótesis y conflictos epistémicos surgen de la experiencia humana, del debate interno y del deseo de comprender el mundo, dimensiones que escapan a la mecánica de la IA. El trabajo propone un marco ético de reconocimiento que respete el valor humano del pensamiento científico sin desconocer el aporte técnico de las herramientas algorítmicas.

“Porque tenemos aguante”: Una aproximación a la práctica del live coding musical en América Latina

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Topic: Aesthetic Issues in and of Computing
Keywords: Latin America, Tidal Cycles, live coding, music

El surgimiento y consolidación del *live coding* audiovisual y el desarrollo de entornos de programación orientados a estas prácticas artísticas (SonicPi, Tidal Cycles o Hydra), han dado lugar a la conformación de gran número de producciones musicales y tentativas de reflexión en torno a las posibilidades estéticas derivadas de estos quehaceres. De esta manera, esta orientación artística ha permitido el encuentro entre tradiciones artísticas de naturaleza diversa, entre las que se encuentran la música de concierto, la música experimental y la música pop, y ha contribuido a reconocer las afinidades y las divergencias existentes entre las estrategias compositivas y las búsquedas artísticas entre estos diversos ámbitos sonoros [McLean y Dean, 2018; Blackwell, Cocker, Cox, McLean y Magnusson 2022]. Gracias a la emergencia de plataformas como GitHub, Soundcloud y Bandcamp, se ha integrado un importante acervo de piezas musicales codificadas y grabadas, a través de las que es posible perfilar estrategias de análisis de corte interdisciplinario que permitan comprender las posibilidades artísticas y las consecuencias estéticas de esta orientación artística. Esta ponencia ofrecerá una propuesta de análisis básica para obras sonoras compuestas a partir de la práctica del *live coding* audiovisual. Para ello, dirigirá su atención a la producción musical de le compositore y artista visual argentine GEIKHA, y la labor de documentación de su quehacer computacional y sonoro en los repositorios GitHub y Soundcloud. Así, buscará analizar y caracterizar la solidaridad existente entre la concepción de la obra musical, su implementación y realización computacional en el entorno de programación TidalCycles, y los resultados sonoros obtenidos. A su vez, estas observaciones permitirán identificar las afinidades y las aportaciones de le artiste argentine a los procedimientos compositivos y las estrategias artísticas vinculadas a la estética de la posproducción contemporánea y sus posibilidades críticas [Szendy 2003; Plasketes 2010; Bourriaud 2021].